

# FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO  
Channel Energy Center, LLC

AUTHORIZING THE OPERATION OF  
Channel Energy Center  
Fossil Fuel Electric Power Generation

LOCATED AT  
Harris County, Texas  
Latitude 29° 43' 8" Longitude 95° 13' 55"  
Regulated Entity Number: RN100213107

This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site, emission units and affected source listed in this permit. Operations of the site, emission units and affected source listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site, emission units and affected source authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site, emission units and affected source.

Permit No: O2084 Issuance Date: \_\_\_\_\_

\_\_\_\_\_  
For the Commission

## Table of Contents

Section	Page
General Terms and Conditions .....	1
Special Terms and Conditions: .....	1
Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting.....	1
Additional Monitoring Requirements .....	6
New Source Review Authorization Requirements .....	6
Compliance Requirements.....	7
Risk Management Plan .....	9
Protection of Stratospheric Ozone .....	9
Temporary Fuel Shortages (30 TAC § 112.15) .....	9
Permit Location .....	9
Permit Shield (30 TAC § 122.148) .....	9
Acid Rain Permit Requirements .....	10
Cross-State Air Pollution Rule (CSAPR) Trading Program Requirements .....	13
Attachments .....	20
Applicable Requirements Summary.....	21
Additional Monitoring Requirements .....	61
Permit Shield .....	72
New Source Review Authorization References .....	80
Appendix A.....	85
Acronym List .....	86
Appendix B.....	87
Major NSR Summary Table .....	88

## **General Terms and Conditions**

The permit holder shall comply with all terms and conditions contained in 30 TAC § 122.143 (General Terms and Conditions), 30 TAC § 122.144 (Recordkeeping Terms and Conditions), 30 TAC § 122.145 (Reporting Terms and Conditions), and 30 TAC § 122.146 (Compliance Certification Terms and Conditions).

In accordance with 30 TAC § 122.144(1), records of required monitoring data and support information required by this permit, or any applicable requirement codified in this permit, are required to be maintained for a period of five years from the date of the monitoring report, sample, or application unless a longer data retention period is specified in an applicable requirement. The five year record retention period supersedes any less stringent retention requirement that may be specified in a condition of a permit identified in the New Source Review Authorization attachment.

If the permit holder chooses to demonstrate that this permit is no longer required, a written request to void this permit shall be submitted to the Texas Commission on Environmental Quality (TCEQ) by the Responsible Official in accordance with 30 TAC § 122.161(e). The permit holder shall comply with the permit's requirements, including compliance certification and deviation reporting, until notified by the TCEQ that this permit is voided.

The permit holder shall comply with 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit.

All reports required by this permit must include in the submittal a cover letter which identifies the following information: company name, TCEQ regulated entity number, air account number (if assigned), site name, area name (if applicable), and Air Permits Division permit number(s).

## **Special Terms and Conditions:**

### **Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting**

1. Permit holder shall comply with the following requirements:
  - A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.
  - B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.
  - C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.
  - D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.

- E. Emission units subject to 40 CFR Part 63, Subpart ZZZZ as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113, Subchapter C, §113.1090 which incorporates the 40 CFR Part 63 Subpart by reference.
- F. For the purpose of generating emission reduction credits through 30 TAC Chapter 101, Subchapter H, Division 1 (Emission Credit Banking and Trading), the permit holder shall comply with the following requirements:
  - (i) Title 30 TAC § 101.302 (relating to General Provisions)
  - (ii) Title 30 TAC § 101.303 (relating to Emission Reduction Credit Generation Certification)
  - (iii) Title 30 TAC § 101.304 (relating to Mobile Emission Reduction Credit Generation and Certification)
  - (iv) Title 30 TAC § 101.309 (relating to Emission Credit Banking and Trading)
  - (v) The terms and conditions by which the emission limits are established to generate the reduction credit are applicable requirements of this permit
- G. The permit holder shall comply with the following 30 TAC Chapter 101, Subchapter H, Division 3 (Mass Emission Cap and Trade Program) Requirements:
  - (i) Title 30 TAC § 101.352 (relating to General Provisions)
  - (ii) Title 30 TAC § 101.353 (relating to Allocation of Allowances)
  - (iii) Title 30 TAC § 101.354 (relating to Allowance Deductions)
  - (iv) Title 30 TAC § 101.356 (relating to Allowance Banking and Trading)
  - (v) Title 30 TAC § 101.359 (relating to Reporting)
  - (vi) Title 30 TAC § 101.360 (relating to Level of Activity Certification)
  - (vii) The terms and conditions by which the emission limits are established to meet or exceed the cap are applicable requirements of this permit
- H. For the purpose of generating discrete emission reduction credits through 30 TAC Chapter 101, Subchapter H, Division 4 (Discrete Emission Credit Banking and Trading), the permit holder shall comply with the following requirements:
  - (i) Title 30 TAC § 101.372 (relating to General Provisions)
  - (ii) Title 30 TAC § 101.373 (relating to Discrete Emission Reduction Credit Generation and Certification)
  - (iii) Title 30 TAC § 101.374 (relating to Mobile Discrete Emission Reduction Credit Generation and Certification)
  - (iv) Title 30 TAC § 101.378 (relating to Discrete Emission Credit Banking and Trading)



- (v) The terms and conditions by which the emission limits are established to generate the discrete reduction credit are applicable requirements of this permit
- 2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):
  - A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements
  - B. Title 30 TAC § 101.3 (relating to Circumvention)
  - C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ
  - D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ
  - E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)
  - F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)
  - G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)
  - H. Title 30 TAC § 101.221 (relating to Operational Requirements)
  - I. Title 30 TAC § 101.222 (relating to Demonstrations)
  - J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)
- 3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:
  - A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment for 30 TAC Chapter 111, Subchapter A, Division 1, shall not exceed 20% opacity averaged over a six-minute period. The permit holder shall comply with the following requirements for stationary vents at the site subject to this standard:
    - (i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)
    - (ii) Title 30 TAC § 111.111(a)(1)(E)
    - (iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)
    - (iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO<sub>x</sub>, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive ventilation, such as plumbing vents; or vent emissions from any other source that

does not obstruct the transmission of light. Vents, as specified in the “Applicable Requirements Summary” attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) are not subject to the following periodic monitoring requirements:

- (1) An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.
- (2) For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum required value does not constitute creation of an alternative fuel.
- (3) Records of all observations shall be maintained.
- (4) Visible emissions observations of emission units operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of emission units operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions observations shall be made during times when the activities described in 30 TAC § 111.111(a)(1)(E) are not taking place. Visible emissions shall be determined with each stationary vent in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each stationary vent during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer’s eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.
- (5) Compliance Certification:
  - (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(1) and (a)(1)(B).
  - (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(1)(F) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is

determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

- (c) Some vents may be subject to multiple visible emission or monitoring requirements. All credible data must be considered when certifying compliance with this requirement even if the observation or monitoring was performed to demonstrate compliance with a different requirement.
- B. Permit holders for sites that have materials handling, construction, roads, streets, alleys, and parking lots shall comply with the following requirements:
  - (i) Title 30 TAC § 111.145 (relating to Construction and Demolition)
  - (ii) Title 30 TAC § 111.147 (relating to Roads, Streets, and Alleys)
  - (iii) Title 30 TAC § 111.149 (relating to Parking Lots)
- C. Emission limits on nonagricultural processes, except for the steam generators specified in 30 TAC § 111.153, shall comply with the following requirements:
  - (i) Emissions of PM from any source may not exceed the allowable rates as required in 30 TAC § 111.151(a) (relating to Allowable Emissions Limits)
  - (ii) Sources with an effective stack height ( $h_e$ ) less than the standard effective stack height ( $H_e$ ), must reduce the allowable emission level by multiplying it by  $[h_e/H_e]^2$  as required in 30 TAC § 111.151(b)
  - (iii) Effective stack height shall be calculated by the equation specified in 30 TAC § 111.151(c)
- 4. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 60, unless otherwise stated in the applicable subpart:
  - A. Title 40 CFR § 60.7 (relating to Notification and Recordkeeping)
  - B. Title 40 CFR § 60.8 (relating to Performance Tests)
  - C. Title 40 CFR § 60.11 (relating to Compliance with Standards and Maintenance Requirements)
  - D. Title 40 CFR § 60.12 (relating to Circumvention)
  - E. Title 40 CFR § 60.13 (relating to Monitoring Requirements)
  - F. Title 40 CFR § 60.14 (relating to Modification)
  - G. Title 40 CFR § 60.15 (relating to Reconstruction)
  - H. Title 40 CFR § 60.19 (relating to General Notification and Reporting Requirements)

5. The permit holder shall comply with the requirements of 30 TAC Chapter 113, Subchapter C, § 113.100 for units subject to any subpart of 40 CFR Part 63, unless otherwise stated in the applicable subpart.
6. For each gasoline dispensing facility, with a throughput of less than 10,000 gallons per month as specified in 40 CFR Part 63, Subpart CCCCCC, the permit holder shall comply with the following requirements (Title 30 TAC, Subchapter C, § 113.1380 incorporated by reference):
  - A. Title 40 CFR § 63.11111(e), for records of monthly throughput
  - B. Title 40 CFR § 63.11111(i), for compliance due to increase of throughput
  - C. Title 40 CFR § 63.11113(c), for compliance due to increase of throughput
  - D. Title 40 CFR § 63.11115(a), for operation of the source
  - E. Title 40 CFR § 63.11116(a) and (a)(1) - (4), for work practices
  - F. Title 40 CFR § 63.11116(b), for records availability
  - G. Title 40 CFR § 63.11116(d), for portable gasoline containers

#### **Additional Monitoring Requirements**

7. The permit holder shall comply with the periodic monitoring requirements as specified in the attached "Periodic Monitoring Summary" upon issuance of the permit. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permit holder shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging time or minimum frequency specified in the "Periodic Monitoring Summary," for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances to avoid reporting deviations. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).

#### **New Source Review Authorization Requirements**

8. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule, standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:
  - A. Are incorporated by reference into this permit as applicable requirements
  - B. Shall be located with this operating permit
  - C. Are not eligible for a permit shield
9. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.

10. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).
11. The permit holder shall comply with the following requirements for Air Quality Standard Permits:
  - A. Registration requirements listed in 30 TAC § 116.611, unless otherwise provided for in an Air Quality Standard Permit
  - B. General Conditions listed in 30 TAC § 116.615, unless otherwise provided for in an Air Quality Standard Permit
  - C. Requirements of the Electric Generating Unit Standard Permit for facilities located in the East Texas region based on the information contained in the registration application.

#### **Compliance Requirements**

12. The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period may not exceed 12 months and the certification must be submitted within 30 days after the end of the period being certified.
13. Permit holder shall comply with the following 30 TAC Chapter 117 requirements:
  - A. The permit holder shall comply with the compliance schedules and submit written notification to the TCEQ Executive Director as required in 30 TAC Chapter 117, Subchapter H, Division 1:
    - (i) For sources in the Houston-Galveston-Brazoria Nonattainment area, 30 TAC § 117.9020:
      - (1) Title 30 TAC § 117.9020(2)(A), (C), and (D)
    - (ii) For electric generating facilities in the Houston-Galveston-Brazoria Nonattainment area, 30 TAC § 117.9020(2)(B)
  - B. The permit holder shall comply with the requirements of 30 TAC § 117.354 for Final Control Plan Procedures for Attainment Demonstration Emission Specifications and 30 TAC § 117.356 for Revision of Final Control Plan.
14. Use of Emission Credits to comply with applicable requirements:
  - A. Unless otherwise prohibited, the permit holder may use emission credits to comply with the following applicable requirements listed elsewhere in this permit:

- (i) Title 30 TAC Chapter 115
    - (ii) Title 30 TAC Chapter 117
    - (iii) Offsets for Title 30 TAC Chapter 116
  - B. The permit holder shall comply with the following requirements in order to use the emission credits to comply with the applicable requirements:
    - (i) The permit holder must notify the TCEQ according to 30 TAC § 101.306(c)-(d)
    - (ii) The emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 1
    - (iii) The executive director has approved the use of the credit according to 30 TAC § 101.306(c)-(d)
    - (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.302(g) and 30 TAC Chapter 122
    - (v) Title 30 TAC § 101.305 (relating to Emission Reductions Achieved Outside the United States)
15. Use of Discrete Emission Credits to comply with the applicable requirements:
- A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:
    - (i) Title 30 TAC Chapter 115
    - (ii) Title 30 TAC Chapter 117
    - (iii) If applicable, offsets for Title 30 TAC Chapter 116
    - (iv) Temporarily exceed state NSR permit allowables
  - B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:
    - (i) The permit holder must notify the TCEQ according to 30 TAC § 101.376(d)
    - (ii) The discrete emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 4
    - (iii) The executive director has approved the use of the discrete emission credits according to 30 TAC § 101.376(d)(1)(A)
    - (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.372(h) and 30 TAC Chapter 122

- (v) Title 30 TAC § 101.375 (relating to Emission Reductions Achieved Outside the United States)

### **Risk Management Plan**

- 16. For processes subject to 40 CFR Part 68 and specified in 40 CFR § 68.10, the permit holder shall comply with the requirements of the Accidental Release Prevention Provisions in 40 CFR Part 68. The permit holder shall submit to the appropriate agency either a compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR § 68.10(a), or as part of the compliance certification submitted under this permit, a certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of a risk management plan.

### **Protection of Stratospheric Ozone**

- 17. Permit holders at a site subject to Title VI of the FCAA Amendments shall meet the following requirements for protection of stratospheric ozone:
  - A. Any on site servicing, maintenance, and repair on refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants or non-exempt substitutes shall be conducted in accordance with 40 CFR Part 82, Subpart F. Permit holders shall ensure that repairs on or refrigerant removal from refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants are performed only by properly certified technicians using certified equipment. Records shall be maintained as required by 40 CFR Part 82, Subpart F.

### **Temporary Fuel Shortages (30 TAC § 112.15)**

- 18. The permit holder shall comply with the following 30 TAC Chapter 112 requirements:
  - A. Title 30 TAC § 112.15 (relating to Temporary Fuel Shortage Plan Filing Requirements)
  - B. Title 30 TAC § 112.16(a), (a)(1), and (a)(2)(B) - (C) (relating to Temporary Fuel Shortage Plan Operating Requirements)
  - C. Title 30 TAC § 112.17 (relating to Temporary Fuel Shortage Plan Notification Procedures)
  - D. Title 30 TAC § 112.18 (relating to Temporary Fuel Shortage Plan Reporting Requirements)

### **Permit Location**

- 19. The permit holder shall maintain a copy of this permit and records related to requirements listed in this permit on site.

### **Permit Shield (30 TAC § 122.148)**

- 20. A permit shield is granted for the emission units, groups, or processes specified in the attached "Permit Shield." Compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements listed in the attachment "Permit Shield." Permit shield provisions shall not be modified by the executive director until notification is provided to the permit holder. No later than 90 days after notification of a change in a determination made by the executive director, the permit holder shall apply for the appropriate permit revision to reflect the new determination.

Provisional terms are not eligible for this permit shield. Any term or condition, under a permit shield, shall not be protected by the permit shield if it is replaced by a provisional term or condition or the basis of the term and condition changes.

### **Acid Rain Permit Requirements**

21. For units GTG1, GTG2 and CTG3 (identified in the Certificate of Representation as units CTG1, CTG2 and CTG3), located at the affected source identified by ORIS/Facility code 55299, the designated representative and the owner or operator, as applicable, shall comply with the following Acid Rain Permit requirements.

#### **A. General Requirements**

- (i) Under 30 TAC § 122.12(1) and 40 CFR Part 72, the Acid Rain Permit requirements contained here are a separable portion of the Federal Operating Permit (FOP) and have an independent public comment process which may be separate from, or combined with the FOP.
- (ii) The owner and operator shall comply with the requirements of 40 CFR Part 72 and 40 CFR Part 76. Any noncompliance with the Acid Rain Permit will be considered noncompliance with the FOP and may be subject to enforcement action.
- (iii) The owners and operators of the affected source shall operate the source and the unit in compliance with the requirements of this Acid Rain Permit and all other applicable State and federal requirements.
- (iv) The owners and operators of the affected source shall comply with the General Terms and Conditions of the FOP that incorporates this Acid Rain Permit.
- (v) The term for the Acid Rain permit shall commence with the issuance of the FOP that incorporates the Acid Rain permit and shall be run concurrent with the remainder of the term of the FOP. Renewal of the Acid Rain permit shall coincide with the renewal of the FOP that incorporates the Acid Rain permit and subsequent terms shall be no more than five years from the date of renewal of the FOP and run concurrent with the permit term of the FOP.

#### **B. Monitoring Requirements**

- (i) The owners and operators, and the designated representative, of the affected source and each affected unit at the source shall comply with the monitoring requirements contained in 40 CFR Part 75.
- (ii) The emissions measurements recorded and reported in accordance with 40 CFR Part 75 and any other credible evidence shall be used to determine compliance by the affected source with the acid rain emissions limitations and emissions reduction requirements for SO<sub>2</sub> and NO<sub>x</sub> under the ARP.
- (iii) The requirements of 40 CFR Part 75 shall not affect the responsibility of the owners and operators to monitor emission of other pollutants or other emissions characteristics at the unit under other applicable requirements of the FCAA Amendments (42 U.S.C. 7401, as amended November 15, 1990) and other terms and conditions of the operating permit for the source.

#### **C. SO<sub>2</sub> emissions requirements**



- (i) The owners and operators of each source and each affected unit at the source shall comply with the applicable acid rain emissions limitations for SO<sub>2</sub>.
- (ii) As of the allowance transfer deadline the owners and operators of the affected source and each affected unit at the source shall hold, in the unit's compliance subaccount, allowances in an amount not less than the total annual emissions of SO<sub>2</sub> for the previous calendar year.
- (iii) Each ton of SO<sub>2</sub> emitted in excess of the acid rain emissions limitations for SO<sub>2</sub> shall constitute a separate violation of the FCAA amendments.
- (iv) An affected unit shall be subject to the requirements under (i) and (ii) of the SO<sub>2</sub> emissions requirements as follows:
  - (1) Starting January 1, 2000, an affected unit under 40 CFR § 72.6(a)(2); or
  - (2) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR Part 75, an affected unit under 40 CFR § 72.6(a)(3).
- (v) Allowances shall be held in, deducted from, or transferred into or among Allowance Tracking System accounts in accordance with the requirements of the ARP.
- (vi) An allowance shall not be deducted, for compliance with the requirements of this permit, in a calendar year before the year for which the allowance was allocated.
- (vii) An allowance allocated by the EPA Administrator or under the ARP is a limited authorization to emit SO<sub>2</sub> in accordance with the ARP. No provision of the ARP, Acid Rain permit application, this Acid Rain Permit, or an exemption under 40 CFR §§ 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (viii) An allowance allocated by the EPA Administrator under the ARP does not constitute a property right.

D. NO<sub>x</sub> Emission Requirements

- (i) The owners and operators of the source and each affected unit at the source shall comply with the applicable acid rain emissions limitations for NO<sub>x</sub> under 40 CFR Part 76.

E. Excess emissions requirements for SO<sub>2</sub> and NO<sub>x</sub>.

- (i) The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR Part 77.
- (ii) If an affected source has excess emissions in any calendar year shall, as required by 40 CFR Part 77:
  - (1) Pay, without demand, the penalty required and pay, upon demand, the interest on that penalty.
  - (2) Comply with the terms of an approved offset plan.

F. Recordkeeping and Reporting Requirements

- (i) Unless otherwise provided, the owners and operators of the affected source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the permitting authority or the EPA Administrator.
  - (1) The certificate of representation for the designated representative for the source and each affected unit and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR § 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative.
  - (2) All emissions monitoring information, in accordance with 40 CFR Part 75, provided that to the extent that 40 CFR Part 75 provides for a 3-year period for recordkeeping (rather than a five-year period cited in 30 TAC § 122.144), the 3-year period shall apply.
  - (3) Copies of all reports, compliance certifications, and other submissions and all records made or required under the ARP or relied upon for compliance certification.
  - (4) Copies of all documents used to complete an acid rain permit application and any other submission under the ARP or to demonstrate compliance with the requirements of the ARP.
- (ii) The designated representative of an affected source and each affected unit at the source shall submit the reports required under the ARP including those under 40 CFR Part 72, Subpart I and 40 CFR Part 75.

G. Liability

- (i) Any person who knowingly violates any requirement or prohibition of the ARP, a complete acid rain permit application, an acid rain permit, or a written exemption under 40 CFR §§ 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to FCAA § 113(c).
- (ii) Any person who knowingly makes a false, material statement in any record, submission, or report under the ARP shall be subject to criminal enforcement pursuant to FCAA § 113(c) and 18 U.S.C. 1001.
- (iii) No permit revision shall excuse any violation of the requirements of the ARP that occurs prior to the date that the revision takes effect.
- (iv) The affected source and each affected unit shall meet the requirements of the ARP contained in 40 CFR Parts 72 through 78.
- (v) Any provision of the ARP that applies to an affected source or the designated representative of an affected source shall also apply to the owners and operators of such source and of the affected units at the source.

- (vi) Any provision of the ARP that applies to an affected unit (including a provision applicable to the DR of an affected unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR § 72.44 (Phase II repowering extension plans) and 40 CFR § 76.11 (NO<sub>x</sub> averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR Part 75 (including 40 CFR §§ 75.16, 75.17, and 75.18), the owners and operators and the DR of one affected unit shall not be liable for any violation by any other affected unit of which they are not owners or operators or the DR and that is located at a source of which they are not owners or operators or the DR.
  - (vii) Each violation of a provision of 40 CFR Parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or DR of such source or unit, shall be a separate violation of the FCAA Amendments.
- H. Effect on other authorities. No provision of the ARP, an acid rain permit application, an acid rain permit, or an exemption under 40 CFR §§ 72.7 or 72.8 shall be construed as:
- (i) Except as expressly provided in Title IV of the FCAA Amendments, exempting or excluding the owners and operators and, to the extent applicable, the DR of an affected source or affected unit from compliance with any other provision of the FCAA Amendments, including the provisions of Title I of the FCAA Amendments relating to applicable National Ambient Air Quality Standards or State Implementation Plans.
  - (ii) Limiting the number of allowances a unit can hold; provided, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the FCAA Amendments.
  - (iii) Requiring a change of any kind in any state law regulating electric utility rates and charges, affecting any state law regarding such state regulation, or limiting such state regulation, including any prudence review requirements under such state law.
  - (iv) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
  - (v) Interfering with or impairing any program for competitive bidding for power supply in a state in which such program is established.
- I. The number of SO<sub>2</sub> allowances allocated by the EPA in 40 CFR Part 73 is enforceable only by the EPA Administrator.

### **Cross-State Air Pollution Rule (CSAPR) Trading Program Requirements**

22. For units GTG1, GTG2 and CTG3 (identified in the Certificate of Representation as units CTG1, CTG2 and CTG3), located at the site identified by ORIS/Facility code 55299, the designated representative and the owner or operator, as applicable, shall comply with the following CSAPR requirements.
- A. General Requirements
- (i) The owners and operators of the CSAPR NO<sub>x</sub> Ozone Season Group 2 source and each CSAPR NO<sub>x</sub> Ozone Season Group 2 unit at the source shall operate the source and the unit in compliance with the requirements of the CSAPR NO<sub>x</sub>

Ozone Season Group 2 Trading Program and all other applicable State and federal requirements.

- (ii) The owners and operators of the CSAPR NO<sub>x</sub> Ozone Season Group 2 source and each CSAPR NO<sub>x</sub> Ozone Season Group 2 unit at the source shall comply with the requirements of 40 CFR Part 97, Subpart EEEEE for CSAPR NO<sub>x</sub> Ozone Season Group 2 Trading Program, and with the General Terms and Conditions of the Federal Operating Permit (FOP) that incorporates the CSAPR requirements.

B. Description of CSAPR Monitoring Provisions

- (i) The CSAPR subject unit(s), and the unit-specific monitoring provisions at this source, are identified in the following paragraph(s). These unit(s) are subject to the requirements for the CSAPR NO<sub>x</sub> Ozone Season Group 2 Trading Program.
  - (1) For unit(s) GTG1, GTG2 and CTG3, the owners and operators shall comply with the continuous emission monitoring system or systems (CEMS) requirements pursuant to 40 CFR Part 75, Subpart H for NO<sub>x</sub>, and with the excepted monitoring system requirements for gas- and oil-fired units pursuant to 40 CFR Part 75, Appendix D for heat input.
  - (2) For unit(s) GTG1, GTG2 and CTG3, the owners and operators shall comply with the EPA-approved alternative monitoring system requirements pursuant to 40 CFR Part 75, Subpart E for NO<sub>x</sub> and heat input.
- (ii) The above description of the monitoring used by a unit does not change, create an exemption from, or otherwise affect the monitoring, recordkeeping, and reporting requirements applicable to the unit under 40 CFR §§ 97.830 through 97.835 (CSAPR NO<sub>x</sub> Ozone Season Group 2 Trading Program). The monitoring, recordkeeping and reporting requirements applicable to each unit are included below in the standard conditions for the applicable CSAPR trading program.
- (iii) Owners and operators must submit to the Administrator a monitoring plan for each unit in accordance with 40 CFR §§ 75.53, 75.62 and 75.73, as applicable. The monitoring plan for each unit is available at the EPA's website at <https://www.epa.gov/airmarkets/clean-air-markets-monitoring-plans-part-75-sources>.
- (iv) Owners and operators that want to use an alternative monitoring system must submit to the Administrator a petition requesting approval of the alternative monitoring system in accordance with 40 CFR Part 75, Subpart E and 40 CFR § 75.66 and § 97.835 (CSAPR NO<sub>x</sub> Ozone Season Group 2 Trading Program). The Administrator's response approving or disapproving any petition for an alternative monitoring system is available on the EPA's website at <https://www.epa.gov/airmarkets/part-75-petition-responses>.
- (v) Owners and operators that want to use an alternative to any monitoring, recordkeeping, or reporting requirement under 40 CFR §§ 97.830 through 97.834 (CSAPR NO<sub>x</sub> Ozone Season Group 2 Trading Program) must submit to the Administrator a petition requesting approval of the alternative in accordance with 40 CFR § 75.66 and § 97.835 (CSAPR NO<sub>x</sub> Ozone Season Group 2 Trading Program). The Administrator's response approving or disapproving any petition for an alternative to a monitoring, recordkeeping, or reporting requirement is

available on the EPA's website at  
<https://www.epa.gov/airmarkets/part-75-petition-responses>.

- (vi) The descriptions of monitoring applicable to the unit(s) included above meet the requirement of 40 CFR §§ 97.830 through 97.834 (CSAPR NO<sub>x</sub> Ozone Season Group 2 Trading Program), and therefore procedures for minor permit revisions, in accordance with 30 TAC § 122.217, may be used to add or change this unit's monitoring system description.

23. CSAPR NO<sub>x</sub> Ozone Season Group 2 Trading Program Requirements (40 CFR § 97.806)

A. Designated representative requirements

- (i) The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR §§ 97.813 through 97.818.

B. Emissions monitoring, reporting, and recordkeeping requirements

- (i) The owners and operators, and the designated representative, of each CSAPR NO<sub>x</sub> Ozone Season Group 2 source and each CSAPR NO<sub>x</sub> Ozone Season Group 2 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR § 97.830 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), § 97.831 (initial monitoring system certification and recertification procedures), § 97.832 (monitoring system out-of-control periods), § 97.833 (notifications concerning monitoring), § 97.834 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and § 97.835 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).
- (ii) The emissions data determined in accordance with 40 CFR § 97.830 through § 97.835 and any other credible evidence shall be used to calculate allocations of CSAPR NO<sub>x</sub> Ozone Season Group 2 allowances under 40 CFR §§ 97.811(a)(2) and (b) and § 97.812 and to determine compliance with the CSAPR NO<sub>x</sub> Ozone Season Group 2 emissions limitation and assurance provisions under paragraph C. below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR §§ 97.830 through 97.835 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

C. NO<sub>x</sub> emissions requirements

- (i) CSAPR NO<sub>x</sub> Ozone Season Group 2 emissions limitation
  - (1) As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR NO<sub>x</sub> Ozone Season Group 2 source and each CSAPR NO<sub>x</sub> Ozone Season Group 2 unit at the source shall hold, in the source's compliance account, CSAPR NO<sub>x</sub> Ozone Season Group 2 allowances available for deduction for such control period under 40 CFR § 97.824(a) in an amount not less than the tons of

total NO<sub>x</sub> emissions for such control period from all CSAPR NO<sub>x</sub> Ozone Season Group 2 units at the source.

- (2) If total NO<sub>x</sub> emissions during a control period in a given year from the CSAPR NO<sub>x</sub> Ozone Season Group 2 units at a CSAPR NO<sub>x</sub> Ozone Season Group 2 source are in excess of the CSAPR NO<sub>x</sub> Ozone Season Group 2 emissions limitation set forth in paragraph C.(i)(1) above, then:
  - (a) The owners and operators of the source and each CSAPR NO<sub>x</sub> Ozone Season Group 2 unit at the source shall hold the CSAPR NO<sub>x</sub> Ozone Season Group 2 allowances required for deduction under 40 CFR § 97.824(d); and
  - (b) The owners and operators of the source and each CSAPR NO<sub>x</sub> Ozone Season Group 2 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 97, Subpart EEEEE and the Clean Air Act.

(ii) CSAPR NO<sub>x</sub> Ozone Season Group 2 assurance provisions

- (1) If total NO<sub>x</sub> emissions during a control period in a given year from all CSAPR NO<sub>x</sub> Ozone Season Group 2 units at CSAPR NO<sub>x</sub> Ozone Season Group 2 sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NO<sub>x</sub> emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR NO<sub>x</sub> Ozone Season Group 2 allowances available for deduction for such control period under 40 CFR § 97.825(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR § 97.825(b), of multiplying -
  - (a) The quotient of the amount by which the common designated representative's share of such NO<sub>x</sub> emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such NO<sub>x</sub> emissions exceeds the respective common designated representative's assurance level; and
  - (b) The amount by which total NO<sub>x</sub> emissions from all CSAPR NO<sub>x</sub> Ozone Season Group 2 units at CSAPR NO<sub>x</sub> Ozone Season Group 2 sources in the state for such control period exceed the state assurance level.
- (2) The owners and operators shall hold the CSAPR NO<sub>x</sub> Ozone Season Group 2 allowances required under paragraph C.(ii)(1) above, as of

midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.

- (3) Total NO<sub>x</sub> emissions from all CSAPR NO<sub>x</sub> Ozone Season Group 2 units at CSAPR NO<sub>x</sub> Ozone Season Group 2 sources in the state during a control period in a given year exceed the state assurance level if such total NO<sub>x</sub> emissions exceed the sum, for such control period, of the state NO<sub>x</sub> Ozone Season Group 2 trading budget under 40 CFR § 97.810(a) and the state's variability limit under 40 CFR § 97.810(b).
- (4) It shall not be a violation of 40 CFR Part 97, Subpart EEEEE or of the Clean Air Act if total NO<sub>x</sub> emissions from all CSAPR NO<sub>x</sub> Ozone Season Group 2 units at CSAPR NO<sub>x</sub> Ozone Season Group 2 sources in the state during a control period exceed the state assurance level or if a common designated representative's share of total NO<sub>x</sub> emissions from the CSAPR NO<sub>x</sub> Ozone Season Group 2 units at CSAPR NO<sub>x</sub> Ozone Season Group 2 sources in the state during a control period exceeds the common designated representative's assurance level.
- (5) To the extent the owners and operators fail to hold CSAPR NO<sub>x</sub> Ozone Season Group 2 allowances for a control period in a given year in accordance with paragraphs C.(ii)(1) through (3) above,
  - (a) The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and
  - (b) Each CSAPR NO<sub>x</sub> Ozone Season Group 2 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs C.(ii)(1) through (3) above and each day of such control period shall constitute a separate violation of 40 CFR Part 97, Subpart EEEEE and the Clean Air Act.

(iii) Compliance periods

- (1) A CSAPR NO<sub>x</sub> Ozone Season Group 2 unit shall be subject to the requirements under paragraph C.(i) above for the control period starting on the later of May 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR § 97.830(b) and for each control period thereafter.
- (2) A CSAPR NO<sub>x</sub> Ozone Season Group 2 unit shall be subject to the requirements under paragraph C.(ii) above for the control period starting on the later of May 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR § 97.830(b) and for each control period thereafter.

(iv) Vintage of allowances held for compliance

- (1) A CSAPR NO<sub>x</sub> Ozone Season Group 2 allowance held for compliance with the requirements under paragraph C.(i)(1) above for a control period in a given year must be a CSAPR NO<sub>x</sub> Ozone Season Group 2 allowance that was allocated for such control period or a control period in a prior year.

- (2) A CSAPR NO<sub>x</sub> Ozone Season Group 2 allowance held for compliance with the requirements under paragraphs C.(i)(2)(a) and (ii)(1) through (3) above for a control period in a given year must be a CSAPR NO<sub>x</sub> Ozone Season Group 2 allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.
- (v) Allowance Management System requirements. Each CSAPR NO<sub>x</sub> Ozone Season Group 2 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR Part 97, Subpart EEEEE.
- (vi) Limited authorization. A CSAPR NO<sub>x</sub> Ozone Season Group 2 allowance is a limited authorization to emit one ton of NO<sub>x</sub> during the control period in one year. Such authorization is limited in its use and duration as follows:
  - (1) Such authorization shall only be used in accordance with the CSAPR NO<sub>x</sub> Ozone Season Group 2 Trading Program; and
  - (2) Notwithstanding any other provision of 40 CFR Part 97, Subpart EEEEE, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.
- (vii) Property right. A CSAPR NO<sub>x</sub> Ozone Season Group 2 allowance does not constitute a property right.

D. FOP revision requirements

- (i) No FOP revision shall be required for any allocation, holding, deduction, or transfer of CSAPR NO<sub>x</sub> Ozone Season Group 2 allowances in accordance with 40 CFR Part 97, Subpart EEEEE.
- (ii) This FOP incorporates the CSAPR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR §§ 97.830 through 97.835, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR Part 75, subpart H), an excepted monitoring system (pursuant to 40 CFR Part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR § 75.19), and an alternative monitoring system (pursuant to 40 CFR Part 75, subpart E). Therefore the Description of CSAPR Monitoring Provisions for CSAPR subject unit(s) may be added to, or changed, in this FOP using procedures for minor permit revisions in accordance with 30 TAC § 122.217.

E. Additional recordkeeping and reporting requirements

- (i) Unless otherwise provided, the owners and operators of each CSAPR NO<sub>x</sub> Ozone Season Group 2 source and each CSAPR NO<sub>x</sub> Ozone Season Group 2 unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.



- (1) The certificate of representation under 40 CFR § 97.816 for the designated representative for the source and each CSAPR NO<sub>x</sub> Ozone Season Group 2 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR § 97.816 changing the designated representative.
- (2) All emissions monitoring information, in accordance with 40 CFR Part 97, Subpart EEEEE.
- (3) Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR NO<sub>x</sub> Ozone Season Group 2 Trading Program.
- (ii) The designated representative of a CSAPR NO<sub>x</sub> Ozone Season Group 2 source and each CSAPR NO<sub>x</sub> Ozone Season Group 2 unit at the source shall make all submissions required under the CSAPR NO<sub>x</sub> Ozone Season Group 2 Trading Program, except as provided in 40 CFR § 97.818. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under 30 TAC § 122.165.

F. Liability

- (i) Any provision of the CSAPR NO<sub>x</sub> Ozone Season Group 2 Trading Program that applies to a CSAPR NO<sub>x</sub> Ozone Season Group 2 source or the designated representative of a CSAPR NO<sub>x</sub> Ozone Season Group 2 source shall also apply to the owners and operators of such source and of the CSAPR NO<sub>x</sub> Ozone Season Group 2 units at the source.
- (ii) Any provision of the CSAPR NO<sub>x</sub> Ozone Season Group 2 Trading Program that applies to a CSAPR NO<sub>x</sub> Ozone Season Group 2 unit or the designated representative of a CSAPR NO<sub>x</sub> Ozone Season Group 2 unit shall also apply to the owners and operators of such unit.

G. Effect on other authorities

- (i) No provision of the CSAPR NO<sub>x</sub> Ozone Season Group 2 Trading Program or exemption under 40 CFR § 97.805 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR NO<sub>x</sub> Ozone Season Group 2 source or CSAPR NO<sub>x</sub> Ozone Season Group 2 unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

## **Attachments**

**Applicable Requirements Summary**

**Additional Monitoring Requirements**

**Permit Shield**

**New Source Review Authorization References**

### **Applicable Requirements Summary**

<b>Unit Summary .....</b>	<b>22</b>
---------------------------	-----------

<b>Applicable Requirements Summary .....</b>	<b>26</b>
----------------------------------------------	-----------

Note: A “none” entry may be noted for some emission sources in this permit’s “Applicable Requirements Summary” under the heading of “Monitoring and Testing Requirements” and/or “Recordkeeping Requirements” and/or “Reporting Requirements.” Such a notation indicates that there are no requirements for the indicated emission source as identified under the respective column heading(s) for the stated portion of the regulation when the emission source is operating under the conditions of the specified SOP Index Number. However, other relevant requirements pursuant to 30 TAC Chapter 122 including Recordkeeping Terms and Conditions (30 TAC § 122.144), Reporting Terms and Conditions (30 TAC § 122.145), and Compliance Certification Terms and Conditions (30 TAC § 122.146) continue to apply.

### Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
CTG3	STATIONARY TURBINES	N/A	R7300-MSS-1	30 TAC Chapter 117, Subchapter B	CO Emission Limitation = Unit is complying with an Alternative Case Specific Specification under Title 30 TAC §§ 117.125, 117.325 or 117.425., NH3 Emission Limitation = Unit is complying with an Alternative Case Specific Specification under Title 30 TAC §§ 117.125, 117.325 or 117.425.
CTG3	STATIONARY TURBINES	N/A	R7300-NORMAL-1	30 TAC Chapter 117, Subchapter B	CO Emission Limitation = Title 30 TAC § 117.310(c)(1)., NH3 Emission Limitation = Title 30 TAC § 117.310(c)(2).
CTG3	STATIONARY TURBINES	N/A	60KKKK-1	40 CFR Part 60, Subpart KKKK	75% of Peak = The combustion turbine does not operate at less than 75% of peak load or at temperatures less than zero degrees F.
CTG3	STATIONARY TURBINES	N/A	60KKKK-2	40 CFR Part 60, Subpart KKKK	75% of Peak = The combustion turbine operates at less than 75% of peak load or at temperatures less than zero degrees F.
EMENG1	SRIC ENGINES	N/A	63ZZZZ-ENG-1	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
EMENG2	SRIC ENGINES	N/A	63ZZZZ-ENG-2	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
EMERGAIRCOMP	SRIC ENGINES	N/A	63ZZZZ-ENG-3	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GRPAUXBOIL	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	B-1, B-2, B-3	R7300-MSS-2	30 TAC Chapter 117, Subchapter B	CO Emission Limitation = Unit is complying with an Alternative Case Specific Specification under 30 TAC

### Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
					§§ 117.125(a), 117.325(a) or 117.425(a)., NH3 Emission Limitation = Unit is complying with an Alternative Case Specific Specification under 30 TAC §§ 117.125(a), 117.325(a) or 117.425(a).
GRPAUXBOIL	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	B-1, B-2, B-3	R7300-NORMAL-2	30 TAC Chapter 117, Subchapter B	CO Emission Limitation = Title 30 TAC § 117.310(c)(1) 400 ppmv option., NH3 Emission Limitation = Title 30 TAC § 117.310(c)(2).
GRPAUXBOIL	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	B-1, B-2, B-3	60Db-FG-1	40 CFR Part 60, Subpart Db	D-Series Fuel Type #1 = Gaseous fossil fuel other than natural gas and coal-derived synthetic fuel meeting the definition of natural gas.
GRPAUXBOIL	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	B-1, B-2, B-3	60Db-MG-1	40 CFR Part 60, Subpart Db	D-Series Fuel Type #1 = Natural gas., D-Series Fuel Type #2 = Gaseous fossil fuel other than natural gas and coal-derived synthetic fuel meeting the definition of natural gas., Heat Release Rate = Natural gas oil with a heat release rate greater than 70 MBtu/hr/ft <sup>3</sup> .
GRPAUXBOIL	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	B-1, B-2, B-3	60Db-NG-1	40 CFR Part 60, Subpart Db	D-Series Fuel Type #1 = Natural gas., Heat Release Rate = Natural gas oil with a heat release rate greater than 70 MBtu/hr/ft <sup>3</sup> .
GRPAUXSTK	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	AUXBOIL1, AUXBOIL2, AUXBOIL-3	R1111-1	30 TAC Chapter 111, Visible Emissions	No changing attributes.
GRPGTG	STATIONARY TURBINES	GTG-1, GTG-2	R7300-MSS-3	30 TAC Chapter 117, Subchapter B	CO Emission Limitation = Unit is complying with an Alternative Case

### Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
					Specific Specification under Title 30 TAC §§ 117.125, 117.325 or 117.425., NH3 Emission Limitation = Unit is complying with an Alternative Case Specific Specification under Title 30 TAC §§ 117.125, 117.325 or 117.425.
GRPGTG	STATIONARY TURBINES	GTG-1, GTG-2	R7300-NORMAL-3	30 TAC Chapter 117, Subchapter B	CO Emission Limitation = Title 30 TAC § 117.310(c)(1)., NH3 Emission Limitation = Title 30 TAC § 117.310(c)(2).
GRPGTG	STATIONARY TURBINES	GTG-1, GTG-2	60GG	40 CFR Part 60, Subpart GG	No changing attributes.
GRPHRSG	STATIONARY TURBINES	HRSG-1, HRSG-2	R7300-MSS-4	30 TAC Chapter 117, Subchapter B	CO Emission Limitation = Unit is complying with an Alternative Case Specific Specification under Title 30 TAC §§ 117.125, 117.325 or 117.425., NH3 Emission Limitation = Unit is complying with an Alternative Case Specific Specification under Title 30 TAC §§ 117.125, 117.325 or 117.425.
GRPHRSG	STATIONARY TURBINES	HRSG-1, HRSG-2	R7300-NORMAL-4	30 TAC Chapter 117, Subchapter B	CO Emission Limitation = Title 30 TAC § 117.310(c)(1)., NH3 Emission Limitation = Title 30 TAC § 117.310(c)(2).
GRPHRSG	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	HRSG-1, HRSG-2	60Da-FG-2	40 CFR Part 60, Subpart Da	D-Series Fuel Type #1 = Gaseous fossil fuel., Combined Cycle Type = Combined cycle gas turbine (other than an IGCC) that is not subject to NSPS KKKK.
GRPHRSG	BOILERS/STEAM GENERATORS/STEAM	HRSG-1, HRSG-2	60Da-MG-2	40 CFR Part 60, Subpart Da	D-Series Fuel Type #1 = Natural gas., D-Series Fuel Type #2 =

### Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
	GENERATING UNITS				Gaseous fossil fuel., Combined Cycle Type = Combined cycle gas turbine (other than an IGCC) that is not subject to NSPS KKKK.
GRPHRSG	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	HRSG-1, HRSG-2	60Da-NG-2	40 CFR Part 60, Subpart Da	D-Series Fuel Type #1 = Natural gas., Combined Cycle Type = Not a combined cycle gas turbine.
GRPHRSGSTK	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	GTG/HRSG1, GTG/HRSG2, GTG/HRSG3	R1151-1	30 TAC Chapter 111, Nonagricultural Processes	No changing attributes.
GRPHRSGSTK	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	GTG/HRSG1, GTG/HRSG2, GTG/HRSG3	R1111-2	30 TAC Chapter 111, Visible Emissions	No changing attributes.
HRSG3	STATIONARY TURBINES	N/A	R7300-MSS-5	30 TAC Chapter 117, Subchapter B	CO Emission Limitation = Unit is complying with an Alternative Case Specific Specification under Title 30 TAC §§ 117.125, 117.325 or 117.425., NH3 Emission Limitation = Unit is complying with an Alternative Case Specific Specification under Title 30 TAC §§ 117.125, 117.325 or 117.425.
HRSG3	STATIONARY TURBINES	N/A	R7300-NORMAL- 5	30 TAC Chapter 117, Subchapter B	CO Emission Limitation = Title 30 TAC § 117.310(c)(1)., NH3 Emission Limitation = Title 30 TAC § 117.310(c)(2).

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
CTG3	EU	R7300-MSS-1	CO	30 TAC Chapter 117, Subchapter B	§ 117.325(a) § 117.340(f)(1)	Where a person can demonstrate that an affected unit cannot attain the carbon monoxide (CO) specifications of § 117.310(c) of this title the executive director may approve emission specifications different from the CO specifications in § 117.310(c) of this title for that unit.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(3) § 117.335(g) § 117.340(a) § 117.340(e) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8120 § 117.8120(1) § 117.8120(1)(A)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(7) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
CTG3	EU	R7300-MSS-1	NH <sub>3</sub>	30 TAC Chapter 117, Subchapter B	§ 117.325(a) § 117.340(f)(1)	Where a person can demonstrate that an affected unit cannot attain the ammonia specifications of § 117.310(c) of this title the executive director may approve emission specifications different from the ammonia specifications	§ 117.335(a)(2) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(g) § 117.340(d) [G]§ 117.340(f)(2) § 117.8100(a)	§ 117.345(a) § 117.345(f) § 117.345(f)(11) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5)



### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						in § 117.310(c) of this title for that unit.	§ 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8130 § 117.8130(4)		§ 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
CTG3	EU	R7300-MSS-1	NO <sub>x</sub>	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(10)(A) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) § 117.320(a) § 117.320(b) [G]§ 117.320(c) § 117.320(i) § 117.320(j) § 117.320(k) § 117.340(f)(1) § 117.340(l)(2) § 117.340(p)(1) § 117.340(p)(3)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO <sub>x</sub> emission specifications but shall use the mass emissions cap and trade program in Chapter 101, Subchapter H, Division 3, except that electric generating facilities must also comply with the daily and 30-day system cap emission limitations of § 117.320. An owner or operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	§ 117.320(d) [G]§ 117.320(e) § 117.320(h) § 117.320(k) [G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(g) § 117.340(a) [G]§ 117.340(c)(3) [G]§ 117.340(f)(2) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(i) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C)	§ 117.320(f) § 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.320(g) § 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(3) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							§ 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)		
CTG3	EU	R7300-NORMAL-1	CO	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(1) § 117.310(c)(1)(A) § 117.340(f)(1)	CO emissions must not exceed 400 ppmv at 3.0% O <sub>2</sub> , dry basis.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(3) § 117.335(g) § 117.340(a) § 117.340(e) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8120 § 117.8120(1) § 117.8120(1)(A)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(7) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
CTG3	EU	R7300-NORMAL-1	NH <sub>3</sub>	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(2) § 117.310(c)(2)(B) § 117.340(f)(1)	For stationary gas turbines that inject urea or ammonia into the exhaust stream for NO <sub>x</sub> control, ammonia emissions must not exceed 10 ppmv at 15% O <sub>2</sub> , dry.	§ 117.335(a)(2) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(g) § 117.340(d) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8130 § 117.8130(4)	§ 117.345(a) § 117.345(f) § 117.345(f)(11) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
CTG3	EU	R7300-NORMAL-1	NO <sub>x</sub>	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(10)(A) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) § 117.320(a) § 117.320(b) [G]§ 117.320(c) § 117.320(i) § 117.320(j) § 117.320(k)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO <sub>x</sub> emission specifications but shall use the mass emissions cap and trade program in Chapter 101, Subchapter H, Division 3, except that electric generating facilities must also comply with the daily and 30-day system cap	§ 117.320(d) [G]§ 117.320(e) § 117.320(h) § 117.320(k) [G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(g) § 117.340(a) [G]§ 117.340(c)(3) [G]§ 117.340(f)(2) § 117.340(l)(2)	§ 117.320(f) § 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.320(g) § 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(3) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 117.340(f)(1) § 117.340(l)(2) § 117.340(p)(1) § 117.340(p)(3)	emission limitations of § 117.320. An owner or operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	§ 117.340(o)(1) § 117.340(p)(1) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(i) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)		[G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
CTG3	EU	60KKKK-1	NO <sub>x</sub>	40 CFR Part 60, Subpart KKKK	§ 60.4320(a)-Table 1 § 60.4320(a) § 60.4320(b) § 60.4325 § 60.4333(a) § 60.4333(b)(1) § 60.4335(b)(1) [G]§ 60.4345	New, modified, or reconstructed turbine firing natural gas with a heat input at peak load > 850 MMBtu/h must meet the nitrogen oxides emission standard of 15 ppm at 15 percent O <sub>2</sub> .	§ 60.4333(b)(1) § 60.4335(b)(1) [G]§ 60.4345 § 60.4350(a) § 60.4350(b) § 60.4350(c) § 60.4350(d) § 60.4350(e) § 60.4350(f) § 60.4350(h) [G]§ 60.4400(a) § 60.4400(b) § 60.4400(b)(1) § 60.4400(b)(2) § 60.4400(b)(4) § 60.4400(b)(5) § 60.4400(b)(6) [G]§ 60.4405	[G]§ 60.4345 § 60.4350(b)	[G]§ 60.4345 § 60.4350(d) § 60.4375(a) § 60.4380 [G]§ 60.4380(b) § 60.4395
CTG3	EU	60KKKK-1	SO <sub>2</sub>	40 CFR Part 60, Subpart KKKK	§ 60.4330(a)(2) § 60.4333(a)	You must not burn in the subject stationary	§ 60.4365 § 60.4365(b)	§ 60.4365(b)	§ 60.4375(a)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO <sub>2</sub> /J (0.060 lb SO <sub>2</sub> /MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement.	§ 60.4415(a) § 60.4415(a)(1) § 60.4415(a)(1)(ii)		
CTG3	EU	60KKKK-2	NO <sub>x</sub>	40 CFR Part 60, Subpart KKKK	§ 60.4320(a)-Table 1 § 60.4320(a) § 60.4320(b) § 60.4333(a) § 60.4333(b)(1) § 60.4335(b)(1) [G]§ 60.4345	Turbines operating at less than 75 percent of peak load, or turbines operating at temperatures less than 0 degrees F with greater than 30 MW output must meet the nitrogen oxides emission standard of 96 ppm at 15 percent O <sub>2</sub> .	§ 60.4333(b)(1) § 60.4335(b)(1) [G]§ 60.4345 § 60.4350(a) § 60.4350(b) § 60.4350(c) § 60.4350(d) § 60.4350(e) § 60.4350(f) § 60.4350(h) [G]§ 60.4400(a) § 60.4400(b) § 60.4400(b)(1) § 60.4400(b)(2) § 60.4400(b)(4) § 60.4400(b)(5) § 60.4400(b)(6) [G]§ 60.4405	[G]§ 60.4345 § 60.4350(b)	[G]§ 60.4345 § 60.4350(d) § 60.4375(a) § 60.4380 [G]§ 60.4380(b) § 60.4395
CTG3	EU	60KKKK-2	SO <sub>2</sub>	40 CFR Part 60, Subpart KKKK	§ 60.4330(a)(2) § 60.4333(a)	You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO <sub>2</sub> /J (0.060 lb SO <sub>2</sub> /MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement.	§ 60.4365 § 60.4365(b) § 60.4415(a) § 60.4415(a)(1) § 60.4415(a)(1)(ii)	§ 60.4365(b)	§ 60.4375(a)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
EMENG1	EU	63ZZZZ-ENG-1	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6603(a)-Table2d.5 § 63.6595(a)(1) § 63.6605(a) § 63.6605(b) § 63.6625(e) § 63.6625(h) § 63.6625(j) § 63.6640(f)(1) § 63.6640(f)(2) § 63.6640(f)(2)(i) § 63.6640(f)(4) § 63.6640(f)(4)(i)	For each existing emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP that operates 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP that operates 24 hours or less per calendar year, located at an area source, you must comply with the requirements as specified in Table 2d.5.a-c.	§ 63.6625(f) § 63.6625(j) § 63.6640(a) § 63.6640(a)-Table6.9.a.i § 63.6640(a)-Table6.9.a.ii	§ 63.6625(j) § 63.6655(d) § 63.6655(e) § 63.6655(f) § 63.6660(a) § 63.6660(b) § 63.6660(c)	§ 63.6640(e) § 63.6650(f)
EMENG2	EU	63ZZZZ-ENG-2	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6603(a)-Table2d.5 § 63.6595(a)(1) § 63.6605(a) § 63.6605(b) § 63.6625(e) § 63.6625(h) § 63.6625(j) § 63.6640(f)(1) § 63.6640(f)(2) § 63.6640(f)(2)(i) § 63.6640(f)(4) § 63.6640(f)(4)(i)	For each existing emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP that operates 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP that operates 24 hours or less per calendar year, located at an area source, you must comply with the requirements as specified in Table 2d.5.a-c.	§ 63.6625(f) § 63.6625(j) § 63.6640(a) § 63.6640(a)-Table6.9.a.i § 63.6640(a)-Table6.9.a.ii	§ 63.6625(j) § 63.6655(d) § 63.6655(e) § 63.6655(f) § 63.6660(a) § 63.6660(b) § 63.6660(c)	§ 63.6640(e) § 63.6650(f)
EMERGAIR COMP	EU	63ZZZZ-ENG-3	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6603(a)-Table2d.5	For each existing emergency stationary SI	§ 63.6625(f) § 63.6625(j)	§ 63.6625(j) § 63.6655(d)	§ 63.6640(e) § 63.6650(f)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 63.6595(a)(1) § 63.6605(a) § 63.6605(b) § 63.6625(e) § 63.6625(h) § 63.6625(j) § 63.6640(f)(1) § 63.6640(f)(2) § 63.6640(f)(2)(i) § 63.6640(f)(4) § 63.6640(f)(4)(i)	RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP that operates 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP that operates 24 hours or less per calendar year, located at an area source, you must comply with the requirements as specified in Table 2d.5.a-c.	§ 63.6640(a) § 63.6640(a)-Table6.9.a.i § 63.6640(a)-Table6.9.a.ii	§ 63.6655(e) § 63.6655(f) § 63.6660(a) § 63.6660(b) § 63.6660(c)	
GRPAUXBOIL	EU	R7300-MSS-2	NO <sub>x</sub>	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(1)(A) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) § 117.340(f)(1) § 117.340(l)(2) § 117.340(p)(1) § 117.340(p)(3)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO <sub>x</sub> emission specifications but shall use the mass emissions cap and trade program in Chapter 101, Subchapter H, Division 3, except that electric generating facilities must also comply with the daily and 30-day system cap emission limitations of § 117.320. An owner or operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(2) § 117.335(g) § 117.340(a) § 117.340(b)(1) § 117.340(b)(3) § 117.340(c)(1) [G]§ 117.340(c)(3) [G]§ 117.340(f)(2) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(i) § 117.8100(a)(1)(B)(ii)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(3) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							§ 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)		
GRPAUXBO IL	EU	R7300-MSS-2	CO	30 TAC Chapter 117, Subchapter B	§ 117.325(a) § 117.340(f)(1)	Where a person can demonstrate that an affected unit cannot attain the carbon monoxide (CO) specifications of § 117.310(c) of this title the executive director may approve emission specifications different from the CO specifications in § 117.310(c) of this title for that unit.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(3) § 117.335(g) § 117.340(a) § 117.340(b)(1) § 117.340(b)(3) § 117.340(e) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(7) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)



### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							§ 117.8120 § 117.8120(1) § 117.8120(1)(A)		
GRPAUXBO IL	EU	R7300-MSS-2	NH <sub>3</sub>	30 TAC Chapter 117, Subchapter B	§ 117.325(a) § 117.340(f)(1)	Where a person can demonstrate that an affected unit cannot attain the ammonia specifications of § 117.310(c) of this title the executive director may approve emission specifications different from the ammonia specifications in § 117.310(c) of this title for that unit.	§ 117.335(a)(2) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(g) § 117.340(b)(1) § 117.340(b)(3) § 117.340(d) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8130 § 117.8130(4)	§ 117.345(a) § 117.345(f) § 117.345(f)(11) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
GRPAUXBO IL	EU	R7300-NORMAL-2	NO <sub>x</sub>	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(1)(A) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO <sub>x</sub> emission specifications but shall use the mass emissions cap and trade	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(2) § 117.335(g)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(3) § 117.8010 [G]§ 117.8010(1)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 117.340(f)(1) § 117.340(l)(2) § 117.340(p)(1) § 117.340(p)(3)	program in Chapter 101, Subchapter H, Division 3, except that electric generating facilities must also comply with the daily and 30-day system cap emission limitations of § 117.320. An owner or operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	§ 117.340(a) § 117.340(b)(1) § 117.340(b)(3) § 117.340(c)(1) [G]§ 117.340(c)(3) [G]§ 117.340(f)(2) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(i) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)		§ 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
GRPAUXBO IL	EU	R7300-NORMAL-2	CO	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(1) § 117.310(c)(1)(A) § 117.310(c)(3) § 117.340(f)(1) § 117.8120	CO emissions must not exceed 400 ppmv at 3.0% O <sub>2</sub> , dry basis.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(3) § 117.335(g) § 117.340(a) § 117.340(b)(1) § 117.340(b)(3) § 117.340(e) [G]§ 117.340(f)(2) § 117.8100(a)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(7) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							§ 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8120(1) § 117.8120(1)(A)		[G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
GRPAUXBO IL	EU	R7300-NORMAL-2	NH <sub>3</sub>	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(2) § 117.310(c)(2)(B) § 117.340(f)(1)	For boilers that inject urea or ammonia into the exhaust stream for NO <sub>x</sub> control, ammonia emissions must not exceed 10 ppmv at 3.0% O <sub>2</sub> , dry.	§ 117.335(a)(2) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(g) § 117.340(b)(1) § 117.340(b)(3) § 117.340(d) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B)	§ 117.345(a) § 117.345(f) § 117.345(f)(11) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							[G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8130 § 117.8130(4)		
GRPAUXBO IL	EU	60Db-FG-1	SO <sub>2</sub>	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
GRPAUXBO IL	EU	60Db-FG-1	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
GRPAUXBO IL	EU	60Db-FG-1	PM (Opacity)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
GRPAUXBO IL	EU	60Db-FG-1	NO <sub>x</sub>	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
GRPAUXBO IL	EU	60Db-MG-1	SO <sub>2</sub>	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
GRPAUXBO IL	EU	60Db-MG-1	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
GRPAUXBO IL	EU	60Db-MG-1	PM (Opacity)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
GRPAUXBO IL	EU	60Db-MG-1	NO <sub>x</sub>	40 CFR Part 60, Subpart Db	§ 60.44b(l)(1) § 60.44b(h) § 60.44b(i) § 60.46b(a)	Affected facilities combusting coal, oil, or natural gas, or a mixture of these fuels, or any other fuels: a limit of 86 ng/JI (0.20 lb/million Btu) heat input unless the affected facility meets the specified requirements.	§ 60.46b(c) § 60.46b(e) § 60.46b(e)(1) § 60.46b(e)(3) [G]§ 60.48b(b) § 60.48b(c) § 60.48b(d) § 60.48b(e) [G]§ 60.48b(e)(2) § 60.48b(e)(3) § 60.48b(f)	[G]§ 60.48b(b) § 60.48b(c) [G]§ 60.49b(d) [G]§ 60.49b(g) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3) § 60.49b(b) § 60.49b(h) § 60.49b(i) § 60.49b(v) § 60.49b(w)
GRPAUXBO IL	EU	60Db-NG-1	SO <sub>2</sub>	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).			§ 60.49b(a)(3)
GRPAUXBO IL	EU	60Db-NG-1	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
GRPAUXBO IL	EU	60Db-NG-1	PM (Opacity)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
GRPAUXBO IL	EU	60Db-NG-1	NO <sub>x</sub>	40 CFR Part 60, Subpart Db	§ 60.44b(l)(1) § 60.44b(h) § 60.44b(i) § 60.46b(a)	Affected facilities combusting coal, oil, or natural gas, or a mixture of these fuels, or any other fuels: a limit of 86 ng/Jl (0.20 lb/million Btu) heat input unless the affected facility meets the specified requirements.	§ 60.46b(c) § 60.46b(e) § 60.46b(e)(1) § 60.46b(e)(3) [G]§ 60.48b(b) § 60.48b(c) § 60.48b(d) § 60.48b(e) [G]§ 60.48b(e)(2) § 60.48b(e)(3) § 60.48b(f)	[G]§ 60.48b(b) § 60.48b(c) [G]§ 60.49b(d) [G]§ 60.49b(g) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3) § 60.49b(b) § 60.49b(h) § 60.49b(i) § 60.49b(v) § 60.49b(w)
GRPAUXST K	EP	R1111-1	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.			
GRPGTG	EU	R7300-MSS-3	CO	30 TAC Chapter 117, Subchapter B	§ 117.325(a) § 117.340(f)(1)	Where a person can demonstrate that an affected unit cannot attain the carbon monoxide (CO) specifications of § 117.310(c) of this title the executive director may approve emission specifications different from the CO specifications in § 117.310(c) of this title for that unit.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(3) § 117.335(g) § 117.340(a) § 117.340(e) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8120 § 117.8120(1) § 117.8120(1)(A)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(7) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
GRPGTG	EU	R7300-MSS-3	NH <sub>3</sub>	30 TAC Chapter 117, Subchapter B	§ 117.325(a) § 117.340(f)(1)	Where a person can demonstrate that an affected unit cannot attain the ammonia specifications	§ 117.335(a)(2) § 117.335(a)(4) § 117.335(b) § 117.335(c)	§ 117.345(a) § 117.345(f) § 117.345(f)(11) [G]§ 117.345(f)(2)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						of § 117.310(c) of this title the executive director may approve emission specifications different from the ammonia specifications in § 117.310(c) of this title for that unit.	§ 117.335(d) § 117.335(g) § 117.340(d) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8130 § 117.8130(4)	§ 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
GRPGTG	EU	R7300-MSS-3	NO <sub>x</sub>	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(10)(A) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) § 117.320(a) § 117.320(b) [G]§ 117.320(c) § 117.320(i) § 117.320(j) § 117.320(k) § 117.340(f)(1) § 117.340(l)(2) § 117.340(p)(1) § 117.340(p)(3)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO <sub>x</sub> emission specifications but shall use the mass emissions cap and trade program in Chapter 101, Subchapter H, Division 3, except that electric generating facilities must also comply with the daily and 30-day system cap emission limitations of § 117.320. An owner or operator may use the alternative methods	§ 117.320(d) [G]§ 117.320(e) § 117.320(h) § 117.320(k) [G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(g) § 117.340(a) [G]§ 117.340(c)(3) [G]§ 117.340(f)(2) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.8100(a) § 117.8100(a)(1)	§ 117.320(f) § 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.320(g) § 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(3) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6)



### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						specified in § 117.9800 to comply with § 117.320.	§ 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(i) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)		[G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
GRPGTG	EU	R7300-NORMAL-3	CO	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(1) § 117.310(c)(1)(A) § 117.340(f)(1)	CO emissions must not exceed 400 ppmv at 3.0% O <sub>2</sub> , dry basis.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(3) § 117.335(g) § 117.340(a) § 117.340(e) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(7) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							[G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8120 § 117.8120(1) § 117.8120(1)(A)		
GRPGTG	EU	R7300-NORMAL-3	NH <sub>3</sub>	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(2) § 117.310(c)(2)(B) § 117.340(f)(1)	For stationary gas turbines that inject urea or ammonia into the exhaust stream for NO <sub>x</sub> control, ammonia emissions must not exceed 10 ppmv at 15% O <sub>2</sub> , dry.	§ 117.335(a)(2) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(g) § 117.340(d) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8130 § 117.8130(4)	§ 117.345(a) § 117.345(f) § 117.345(f)(11) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
GRPGTG	EU	R7300-NORMAL-3	NO <sub>x</sub>	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(10)(A) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO <sub>x</sub> emission specifications but shall use the mass emissions cap and trade	§ 117.320(d) [G]§ 117.320(e) § 117.320(h) § 117.320(k) [G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c)	§ 117.320(f) § 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.320(g) § 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(3) § 117.8010

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 117.320(a) § 117.320(b) [G]§ 117.320(c) § 117.320(i) § 117.320(j) § 117.320(k) § 117.340(f)(1) § 117.340(l)(2) § 117.340(p)(1) § 117.340(p)(3)	program in Chapter 101, Subchapter H, Division 3, except that electric generating facilities must also comply with the daily and 30-day system cap emission limitations of § 117.320. An owner or operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	§ 117.335(d) § 117.335(g) § 117.340(a) [G]§ 117.340(c)(3) [G]§ 117.340(f)(2) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(i) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)		[G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
GRPGTG	EU	60GG	SO <sub>2</sub>	40 CFR Part 60, Subpart GG	§ 60.333(b)	No stationary gas turbine shall burn any fuel which contains sulfur in excess of 0.8% by weight.	§ 60.334(h) [G]§ 60.334(h)(3)	None	None
GRPGTG	EU	60GG	NO <sub>x</sub>	40 CFR Part 60, Subpart GG	§ 60.332(a)(1) § 60.332(a)(3)	No owner or operator shall discharge into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of the amount as determined from the specified equation.	[G]§ 60.334(b) § 60.334(j) § 60.334(j)(1) [G]§ 60.334(j)(1)(iii) [G]§ 60.335(a) § 60.335(b)(2) § 60.335(b)(3)	[G]§ 60.334(b)	§ 60.334(j) § 60.334(j)(5)
GRPHRSG	EU	R7300-MSS-4	CO	30 TAC Chapter 117, Subchapter B	§ 117.325(a) § 117.340(f)(1)	Where a person can demonstrate that an	[G]§ 117.335(a)(1) § 117.335(a)(4)	§ 117.345(a) § 117.345(f)	§ 117.335(b) § 117.335(g)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						affected unit cannot attain the carbon monoxide (CO) specifications of § 117.310(c) of this title the executive director may approve emission specifications different from the CO specifications in § 117.310(c) of this title for that unit.	§ 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(3) § 117.335(g) § 117.340(a) § 117.340(e) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8120 § 117.8120(1) § 117.8120(1)(A)	§ 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(7) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	[G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
GRPHRSG	EU	R7300-MSS-4	NH <sub>3</sub>	30 TAC Chapter 117, Subchapter B	§ 117.325(a) § 117.340(f)(1)	Where a person can demonstrate that an affected unit cannot attain the ammonia specifications of § 117.310(c) of this title the executive director may approve emission specifications different from the ammonia specifications in § 117.310(c) of this title for that unit.	§ 117.335(a)(2) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(g) § 117.340(d) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A)	§ 117.345(a) § 117.345(f) § 117.345(f)(11) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							§ 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8130 § 117.8130(4)		§ 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
GRPHRSG	EU	R7300-MSS-4	NO <sub>x</sub>	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(10)(A) § 117.310(a)(11) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) § 117.320(a) § 117.320(b) [G]§ 117.320(c) § 117.320(i) § 117.320(j) § 117.320(k) § 117.340(f)(1) § 117.340(l)(2) § 117.340(p)(1) § 117.340(p)(3)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO <sub>x</sub> emission specifications but shall use the mass emissions cap and trade program in Chapter 101, Subchapter H, Division 3, except that electric generating facilities must also comply with the daily and 30-day system cap emission limitations of § 117.320. An owner or operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	§ 117.320(d) [G]§ 117.320(e) § 117.320(h) § 117.320(k) [G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(g) § 117.340(a) [G]§ 117.340(c)(3) [G]§ 117.340(f)(2) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(i) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3)	§ 117.320(f) § 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.320(g) § 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(3) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							§ 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)		
GRPHRSG	EU	R7300-NORMAL-4	CO	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(1) § 117.310(c)(1)(A) § 117.340(f)(1)	CO emissions must not exceed 400 ppmv at 3.0% O <sub>2</sub> , dry basis.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(3) § 117.335(g) § 117.340(a) § 117.340(e) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8120 § 117.8120(1) § 117.8120(1)(A)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(7) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
GRPHRSG	EU	R7300-	NH <sub>3</sub>	30 TAC Chapter	§ 117.310(c)(2)	For duct burners that inject	§ 117.335(a)(2)	§ 117.345(a)	§ 117.335(b)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
		NORMAL-4		117, Subchapter B	§ 117.310(c)(2)(B) § 117.340(f)(1)	urea or ammonia into the exhaust stream for NO <sub>x</sub> control, ammonia emissions must not exceed 10 ppmv at 15% O <sub>2</sub> , dry.	§ 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(g) § 117.340(d) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8130 § 117.8130(4)	§ 117.345(f) § 117.345(f)(11) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
GRPHRSG	EU	R7300-NORMAL-4	NO <sub>x</sub>	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(10)(A) § 117.310(a)(11) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) § 117.320(a) § 117.320(b) [G]§ 117.320(c) § 117.320(i) § 117.320(j) § 117.320(k)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO <sub>x</sub> emission specifications but shall use the mass emissions cap and trade program in Chapter 101, Subchapter H, Division 3, except that electric generating facilities must also comply with the daily and 30-day system cap emission limitations of §	§ 117.320(d) [G]§ 117.320(e) § 117.320(h) § 117.320(k) [G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(g) § 117.340(a) [G]§ 117.340(c)(3) [G]§ 117.340(f)(2) § 117.340(l)(2) § 117.340(o)(1)	§ 117.320(f) § 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.320(g) § 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(3) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 117.340(f)(1) § 117.340(l)(2) § 117.340(p)(1) § 117.340(p)(3)	117.320. An owner or operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	§ 117.340(p)(1) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(i) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)		§ 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
GRPHRSG	EU	60Da-FG-2	PM	40 CFR Part 60, Subpart Da	§ 60.42Da(f) § 60.42Da(f)(1)	The affected facility combusts only gaseous or liquid fuels (excluding residual oil) with potential SO <sub>2</sub> emissions rates of 26 ng/J (0.060 lb/MMBtu) or less, and that does not use a post-combustion technology to reduce emissions of SO <sub>2</sub> or PM, and thus is exempt from the PM emission limits in §60.42Da.	None	None	None
GRPHRSG	EU	60Da-FG-2	PM (OPACITY)	40 CFR Part 60, Subpart Da	§ 60.42Da(b) § 60.48Da(a) [G]§ 60.48Da(s)	On and after the date the initial PM performance test is completed or required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility shall not cause to be discharged into	§ 60.48Da(q) [G]§ 60.49Da(a)(3) § 60.50Da(a) § 60.50Da(b)(3)	[G]§ 60.52Da(b)	§ 60.51Da(a) [G]§ 60.51Da(d) § 60.51Da(h) § 60.51Da(h)(4) § 60.51Da(i) § 60.51Da(j) § 60.51Da(k)



### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						the atmosphere any gases which exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.			
GRPHRSG	EU	60Da-FG-2	NO <sub>x</sub>	40 CFR Part 60, Subpart Da	§ 60.44Da(d)(1) § 60.48Da(a) [G]§ 60.48Da(s)	No owner or operator of an affected facility that commenced construction, reconstruction, or modification after July 9, 1997, but before March 1, 2005, shall cause to be discharged into the atmosphere from that affected facility, which commenced construction, any gases that contain NOX (expressed as NO2) any gases that contain NOX in excess of 200 ng/J (1.6 lb/MWh) as determined on a 30-boiler operating day rolling average basis.	§ 60.48Da(h) § 60.48Da(i) [G]§ 60.48Da(k)(1) § 60.49(j)(2)-(4) § 60.49(o) § 60.50Da(a) [G]§ 60.50Da(e) § 60.50Da(f) ** See Periodic Monitoring Summary	None	§ 60.51Da(a) § 60.51Da(h) § 60.51Da(h)(4) § 60.51Da(j)
GRPHRSG	EU	60Da-FG-2	SO <sub>2</sub>	40 CFR Part 60, Subpart Da	§ 60.43Da(b)(2) § 60.43Da(g) § 60.48Da(a) [G]§ 60.48Da(s)	No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility which combusts liquid or gaseous fuels and for which construction, reconstruction, or modification commenced before or on February 28, 2005, any gases that contain SO2 in excess of	§ 60.50Da(a) [G]§ 60.50Da(e) § 60.50Da(f) ** See Periodic Monitoring Summary	None	§ 60.51Da(a) § 60.51Da(h) § 60.51Da(h)(4) § 60.51Da(j)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						100 percent of the potential combustion concentration (zero percent reduction) when emissions are less than 86 ng/J (0.20 lb/MMBtu) heat input.			
GRPHRSG	EU	60Da-MG-2	PM	40 CFR Part 60, Subpart Da	§ 60.42Da(f) § 60.42Da(f)(1)	The affected facility combusts only gaseous or liquid fuels (excluding residual oil) with potential SO <sub>2</sub> emissions rates of 26 ng/J (0.060 lb/MMBtu) or less, and that does not use a post-combustion technology to reduce emissions of SO <sub>2</sub> or PM, and thus is exempt from the PM emission limits in §60.42Da.	None	None	None
GRPHRSG	EU	60Da-MG-2	PM (OPACITY)	40 CFR Part 60, Subpart Da	§ 60.42Da(b) § 60.48Da(a) [G]§ 60.48Da(s)	On and after the date the initial PM performance test is completed or required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility shall not cause to be discharged into the atmosphere any gases which exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.	§ 60.48Da(q) [G]§ 60.49Da(a)(3) § 60.50Da(a) § 60.50Da(b)(3)	[G]§ 60.52Da(b)	§ 60.51Da(a) [G]§ 60.51Da(d) § 60.51Da(h) § 60.51Da(h)(4) § 60.51Da(i) § 60.51Da(j) § 60.51Da(k)
GRPHRSG	EU	60Da-MG-2	NO <sub>x</sub>	40 CFR Part 60, Subpart Da	§ 60.44Da(d)(1) § 60.48Da(a) [G]§ 60.48Da(s)	No owner or operator of an affected facility that commenced construction, reconstruction, or	§ 60.48Da(h) § 60.48Da(i) [G]§ 60.48Da(k)(1) § 60.49(j)(2)-(4)	None	§ 60.51Da(a) § 60.51Da(h) § 60.51Da(h)(4) § 60.51Da(j)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						modification after July 9, 1997, but before March 1, 2005, shall cause to be discharged into the atmosphere from that affected facility, which commenced construction, any gases that contain NOX (expressed as NO2) any gases that contain NOX in excess of 200 ng/J (1.6 lb/MWh) as determined on a 30-boiler operating day rolling average basis.	§ 60.49(o) § 60.50Da(a) [G]§ 60.50Da(e) § 60.50Da(f) ** See Periodic Monitoring Summary		
GRPHRSG	EU	60Da-MG-2	SO <sub>2</sub>	40 CFR Part 60, Subpart Da	§ 60.43Da(b)(2) § 60.43Da(g) § 60.48Da(a) [G]§ 60.48Da(s)	No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility which combusts liquid or gaseous fuels and for which construction, reconstruction, or modification commenced before or on February 28, 2005, any gases that contain SO <sub>2</sub> in excess of 100 percent of the potential combustion concentration (zero percent reduction) when emissions are less than 86 ng/J (0.20 lb/MMBtu) heat input.	§ 60.50Da(a) [G]§ 60.50Da(e) § 60.50Da(f) ** See Periodic Monitoring Summary	None	§ 60.51Da(a) § 60.51Da(h) § 60.51Da(h)(4) § 60.51Da(j)
GRPHRSG	EU	60Da-NG-2	PM	40 CFR Part 60, Subpart Da	§ 60.42Da(f) § 60.42Da(f)(1)	The affected facility combusts only gaseous or liquid fuels (excluding residual oil) with potential SO <sub>2</sub> emissions rates of 26	None	None	None

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						ng/J (0.060 lb/MMBtu) or less, and that does not use a post-combustion technology to reduce emissions of SO <sub>2</sub> or PM, and thus is exempt from the PM emission limits in §60.42Da.			
GRPHRSG	EU	60Da-NG-2	PM (OPACITY)	40 CFR Part 60, Subpart Da	§ 60.42Da(b)(2)	An owner or operator of an affected facility that combusts only natural gas and/or synthetic natural gas that chemically meets the definition of natural gas is exempt from the opacity standard specified in paragraph (b) of this section.	None	None	None
GRPHRSG	EU	60Da-NG-2	NO <sub>x</sub>	40 CFR Part 60, Subpart Da	§ 60.44Da(d)(1) § 60.48Da(a) [G]§ 60.48Da(s)	No owner or operator of an affected facility that commenced construction, reconstruction, or modification after July 9, 1997, but before March 1, 2005, shall cause to be discharged into the atmosphere from that affected facility, which commenced construction, any gases that contain NO <sub>x</sub> (expressed as NO <sub>2</sub> ) any gases that contain NO <sub>x</sub> in excess of 200 ng/J (1.6 lb/MWh) as determined on a 30-boiler operating day rolling average basis.	§ 60.48Da(h) § 60.48Da(i) [G]§ 60.48Da(k)(1) § 60.49(j)(2)-(4) § 60.49(o) § 60.50Da(a) [G]§ 60.50Da(e) § 60.50Da(f) ** See Periodic Monitoring Summary	None	§ 60.51Da(a) § 60.51Da(h) § 60.51Da(h)(4) § 60.51Da(j)
GRPHRSG	EU	60Da-NG-2	SO <sub>2</sub>	40 CFR Part 60, Subpart Da	§ 60.43Da(b)(2) § 60.43Da(g)	No owner or operator subject to the provisions of	§ 60.50Da(a) [G]§ 60.50Da(e)	§ 60.51Da(a) § 60.51Da(h)	None

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.48Da(a) [G]§ 60.48Da(s)	this subpart shall cause to be discharged into the atmosphere from any affected facility which combusts liquid or gaseous fuels and for which construction, reconstruction, or modification commenced before or on February 28, 2005, any gases that contain SO <sub>2</sub> in excess of 100 percent of the potential combustion concentration (zero percent reduction) when emissions are less than 86 ng/J (0.20 lb/MMBtu) heat input.	§ 60.50Da(f) ** See Periodic Monitoring Summary	§ 60.51Da(h)(4) § 60.51Da(j)	
GRPHRSGS TK	EP	R1151-1	PM	30 TAC Chapter 111, Nonagricultural Processes	§ 111.151(a) § 111.151(c)	No person may cause, suffer, allow, or permit emissions of particulate matter from any source to exceed the allowable rates specified in Table 1 as follows, except as provided by §111.153 of this title (relating to Emissions Limits for Steam Generators).	** See Periodic Monitoring Summary	None	None
GRPHRSGS TK	EP	R1111-2	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
HRSG3	EU	R7300-MSS-5	CO	30 TAC Chapter 117, Subchapter B	§ 117.325(a) § 117.340(f)(1)	Where a person can demonstrate that an affected unit cannot attain	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b)	§ 117.345(a) § 117.345(f) § 117.345(f)(1)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						the carbon monoxide (CO) specifications of § 117.310(c) of this title the executive director may approve emission specifications different from the CO specifications in § 117.310(c) of this title for that unit.	§ 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(3) § 117.335(g) § 117.340(a) § 117.340(e) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8120 § 117.8120(1) § 117.8120(1)(A)	[G]§ 117.345(f)(2) § 117.345(f)(7) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	[G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
HRSG3	EU	R7300-MSS-5	NH <sub>3</sub>	30 TAC Chapter 117, Subchapter B	§ 117.325(a) § 117.340(f)(1)	Where a person can demonstrate that an affected unit cannot attain the ammonia specifications of § 117.310(c) of this title the executive director may approve emission specifications different from the ammonia specifications in § 117.310(c) of this title for that unit.	§ 117.335(a)(2) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(g) § 117.340(d) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B)	§ 117.345(a) § 117.345(f) § 117.345(f)(11) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							§ 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8130 § 117.8130(4)		§ 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
HRSG3	EU	R7300-MSS-5	NO <sub>x</sub>	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(10)(A) § 117.310(a)(11) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) § 117.320(a) § 117.320(b) [G]§ 117.320(c) § 117.320(i) § 117.320(j) § 117.320(k) § 117.340(f)(1) § 117.340(l)(2) § 117.340(p)(1) § 117.340(p)(3)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO <sub>x</sub> emission specifications but shall use the mass emissions cap and trade program in Chapter 101, Subchapter H, Division 3, except that electric generating facilities must also comply with the daily and 30-day system cap emission limitations of § 117.320. An owner or operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	§ 117.320(d) [G]§ 117.320(e) § 117.320(h) § 117.320(k) [G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(g) § 117.340(a) [G]§ 117.340(c)(3) [G]§ 117.340(f)(2) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(i) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4)	§ 117.320(f) § 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.320(g) § 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(3) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							§ 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)		
HRSG3	EU	R7300-NORMAL-5	CO	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(1) § 117.310(c)(1)(A) § 117.340(f)(1)	CO emissions must not exceed 400 ppmv at 3.0% O <sub>2</sub> , dry basis.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(3) § 117.335(g) § 117.340(a) § 117.340(e) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8120 § 117.8120(1) § 117.8120(1)(A)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(7) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
HRSG3	EU	R7300-NORMAL-	NH <sub>3</sub>	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(2) § 117.310(c)(2)(B)	For duct burners that inject urea or ammonia into the	§ 117.335(a)(2) § 117.335(a)(4)	§ 117.345(a) § 117.345(f)	§ 117.335(b) § 117.335(g)



### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
		5			§ 117.340(f)(1)	exhaust stream for NO <sub>x</sub> control, ammonia emissions must not exceed 10 ppmv at 15% O <sub>2</sub> , dry.	§ 117.335(b) § 117.335(c) § 117.335(d) § 117.335(g) § 117.340(d) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8130 § 117.8130(4)	§ 117.345(f)(11) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	[G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
HRSG3	EU	R7300-NORMAL-5	NO <sub>x</sub>	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(10)(A) § 117.310(a)(11) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) § 117.320(a) § 117.320(b) [G]§ 117.320(c) § 117.320(i) § 117.320(j) § 117.320(k) § 117.340(f)(1)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO <sub>x</sub> emission specifications but shall use the mass emissions cap and trade program in Chapter 101, Subchapter H, Division 3, except that electric generating facilities must also comply with the daily and 30-day system cap emission limitations of § 117.320. An owner or	§ 117.320(d) [G]§ 117.320(e) § 117.320(h) § 117.320(k) [G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(g) § 117.340(a) [G]§ 117.340(c)(3) [G]§ 117.340(f)(2) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1)	§ 117.320(f) § 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.320(g) § 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(3) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4)

### Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 117.340(l)(2) § 117.340(p)(1) § 117.340(p)(3)	operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	§ 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(i) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)		[G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)

**Additional Monitoring Requirements**

**Periodic Monitoring Summary ..... 62**

### Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRPAUXSTK	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111-1
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Fuel Type	
Minimum Frequency: Annually	
Averaging Period: n/a	
Deviation Limit: Firing of an alternative fuel, either alone or in combination with the specified fuel (pipeline quality natural gas or refinery gas) containing no more than 5.0 gr total sulfur per 100 dscf.	
Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, it shall be considered and reported as a deviation.	

### Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRPHRSG	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart Da	SOP Index No.: 60Da-FG-2
Pollutant: SO <sub>2</sub>	Main Standard: § 60.43Da(b)(2)
Monitoring Information	
Indicator: Sulfur Content of Fuel	
Minimum Frequency: quarterly and within 24 hours of any fuel change	
Averaging Period: n/a	
Deviation Limit: > 70 gr S/100scf	
Periodic Monitoring Text: Measure and record the sulfur content of the fuel. Any monitoring data above the maximum limit shall be considered and reported as a deviation.	

### Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRPHRSG	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart Da	SOP Index No.: 60Da-MG-2
Pollutant: SO <sub>2</sub>	Main Standard: § 60.43Da(b)(2)
Monitoring Information	
Indicator: Sulfur Content of Fuel	
Minimum Frequency: quarterly and within 24 hours of any fuel change	
Averaging Period: n/a	
Deviation Limit: > 70 gr S/100scf	
Periodic Monitoring Text: Measure and record the sulfur content of the fuel. Any monitoring data above the maximum limit shall be considered and reported as a deviation.	

### Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRPHRSG	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart Da	SOP Index No.: 60Da-MG-2
Pollutant: SO <sub>2</sub>	Main Standard: § 60.43Da(b)(2)
Monitoring Information	
Indicator: Sulfur Content of Fuel	
Minimum Frequency: quarterly and within 24 hours of any fuel change	
Averaging Period: n/a	
Deviation Limit: > 70 gr S/100scf	
Periodic Monitoring Text: Measure and record the sulfur content of the fuel. Any monitoring data above the maximum limit shall be considered and reported as a deviation.	

### Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRPHRSG	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart Da	SOP Index No.: 60Da-NG-2
Pollutant: SO <sub>2</sub>	Main Standard: § 60.43Da(b)(2)
Monitoring Information	
Indicator: Sulfur Content of Fuel	
Minimum Frequency: quarterly and within 24 hours of any fuel change	
Averaging Period: n/a	
Deviation Limit: > 70 gr S/100scf	
Periodic Monitoring Text: Measure and record the sulfur content of the fuel. Any monitoring data above the maximum limit shall be considered and reported as a deviation.	



### Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRPHRSG	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart Da	SOP Index No.: 60Da-FG-2
Pollutant: NO <sub>x</sub>	Main Standard: § 60.44Da(d)(1)
Monitoring Information	
Indicator: NO <sub>x</sub> Concentration	
Minimum Frequency: four times per hour	
Averaging Period: one hour	
Deviation Limit: > 0.15 lb/MMBtu	
<p>Periodic Monitoring Text: Measure and record the concentration of nitrogen oxide in the exhaust stream with a continuous emission monitoring system (CEMS). In addition, monitor the oxygen or carbon dioxide content of the flue gas with a CEMS. The CEMS shall be operated in accordance with the monitoring requirements of 40 CFR § Par 75 and the performance specifications of 40 CFR Part 60, Appendix B. NO<sub>x</sub> emissions shall be corrected/calculated in units of the underlying applicable emission limitation (grams per horsepower hour, pounds per MMBtu, pounds per hour).</p>	

### Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRPHRSG	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart Da	SOP Index No.: 60Da-MG-2
Pollutant: NO <sub>x</sub>	Main Standard: § 60.44Da(d)(1)
Monitoring Information	
Indicator: NO <sub>x</sub> Concentration	
Minimum Frequency: four times per hour	
Averaging Period: one hour	
Deviation Limit: > 0.15 lb/MMBtu	
<p>Periodic Monitoring Text: Measure and record the concentration of nitrogen oxide in the exhaust stream with a continuous emission monitoring system (CEMS). In addition, monitor the oxygen or carbon dioxide content of the flue gas with a CEMS. The CEMS shall be operated in accordance with the monitoring requirements of 40 CFR § Par 75 and the performance specifications of 40 CFR Part 60, Appendix B. NO<sub>x</sub> emissions shall be corrected/calculated in units of the underlying applicable emission limitation (grams per horsepower hour, pounds per MMBtu, pounds per hour).</p>	

### Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRPHRSG	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart Da	SOP Index No.: 60Da-NG-2
Pollutant: NO <sub>x</sub>	Main Standard: § 60.44Da(d)(1)
Monitoring Information	
Indicator: NO <sub>x</sub> Concentration	
Minimum Frequency: four times per hour	
Averaging Period: one hour	
Deviation Limit: > 0.15 lb/MMBtu	
<p>Periodic Monitoring Text: Measure and record the concentration of nitrogen oxide in the exhaust stream with a continuous emission monitoring system (CEMS). In addition, monitor the oxygen or carbon dioxide content of the flue gas with a CEMS. The CEMS shall be operated in accordance with the monitoring requirements of 40 CFR § Par 75 and the performance specifications of 40 CFR Part 60, Appendix B. NO<sub>x</sub> emissions shall be corrected/calculated in units of the underlying applicable emission limitation (grams per horsepower hour, pounds per MMBtu, pounds per hour).</p>	

### Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRPHRSGSTK	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111-2
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Fuel Type	
Minimum Frequency: Annually	
Averaging Period: n/a	
Deviation Limit: Firing of an alternative fuel, either alone or in combination with the specified fuel (pipeline quality natural gas or refinery gas) containing no more than 5.0 gr total sulfur per 100 dscf.	
Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, it shall be considered and reported as a deviation.	

### Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRPHRSGSTK	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Nonagricultural Processes	SOP Index No.: R1151-1
Pollutant: PM	Main Standard: § 111.151(a)
Monitoring Information	
Indicator: Fuel Type	
Minimum Frequency: Annually	
Averaging Period: n/a	
Deviation Limit: Firing of an alternative fuel, either alone or in combination with the specified fuel (pipeline quality natural gas or refinery gas) containing no more than 5.0 gr total sulfur per 100 dscf.	
Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, it shall be considered and reported as a deviation.	

**Permit Shield**

**Permit Shield ..... 73**

### Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
COOLTWR1	N/A	30 TAC Chapter 115, HRVOC Cooling Towers	Does not have potential to emit HRVOCs.
COOLTWR1	N/A	40 CFR Part 63, Subpart Q	No chromium-based water treatment chemicals used.
CTG3	N/A	40 CFR Part 63, Subpart YYYY	Exempt because the stationary combustion turbine is not located at a major source of HAP emissions.
CW-500	N/A	30 TAC Chapter 115, Storage of VOCs	Does not store a VOC.
CW-500	N/A	40 CFR Part 60, Subpart Kb	Capacity<19,800 gallons
DEG-1	N/A	30 TAC Chapter 115, Degreasing Processes	A remote reservoir cold cleaner using a solvent with a TVP < 0.6psia at 100F with a drain area < 16sqin, and waste is disposed of in enclosed containers, is exempt.
EMENG1	N/A	30 TAC Chapter 112, Sulfur Compounds	Not a liquid or solid fuel fired steam generator, furnace, or heater.
EMENG1	N/A	40 CFR Part 60, Subpart IIII	Not constructed, reconstructed, modified after July 11, 2005
EMENG1STK	N/A	30 TAC Chapter 115, HRVOC Vent Gas	Does not have the potential to emit HRVOCs.
EMENG1STK	N/A	30 TAC Chapter 115, Vent Gas Controls	Vent gas stream originates from a combustion unit exhaust stream which is not used as a control device.
EMENG2	N/A	30 TAC Chapter 112, Sulfur Compounds	Not a liquid or solid fuel fired steam generator, furnace, or heater.
EMENG2	N/A	40 CFR Part 60, Subpart IIII	Not constructed, reconstructed, or modified after July 11, 2005.

### Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
EMENG2STK	N/A	30 TAC Chapter 115, HRVOC Vent Gas	Does not have potential to emit HRVOCs.
EMENG2STK	N/A	30 TAC Chapter 115, Vent Gas Controls	Vent gas stream originates from a combustion unit exhaust stream which is not used as a control device.
EMERGAIRCOMP	N/A	30 TAC Chapter 112, Sulfur Compounds	Not a liquid or solid fuel-fired generator, furnace or heater
EMERGAIRCOMP	N/A	40 CFR Part 60, Subpart IIII	Not constructed, reconstructed, or modified after July 11, 2005.
FUELGASFUG	N/A	30 TAC Chapter 115, Fugitives Pet Ref B Counties	Not located at a petroleum refinery, synthetic organic chemical, polymer, resin, or MTBE, or natural gas processing operation.
FUELGASFUG	N/A	30 TAC Chapter 115, HRVOC Fugitive Emissions	Not located at a petroleum refinery, synthetic organic chemical, polymer, resin, or MTBE, or natural gas processing operation.
GRPAUXBOIL	B-1, B-2, B-3	30 TAC Chapter 112, Sulfur Compounds	Steam generator which does not fire liquid or solid fuel.
GRPAUXSTK	AUXBOIL1, AUXBOIL2, AUXBOIL-3	30 TAC Chapter 115, Vent Gas Controls	Vent gas stream originates from a combustion unit exhaust stream which is not used as a control device.
GRPGTG	GTG-1, GTG-2	30 TAC Chapter 112, Sulfur Compounds	Not a liquid or solid fuel fired steam generator, furnace, or heater.
GRPGTG	GTG-1, GTG-2	40 CFR Part 60, Subpart KKKK	Not constructed, reconstructed or modified after February 18, 2005.
GRPGTG	GTG-1, GTG-2	40 CFR Part 63, Subpart YYYY	Not located at a major HAP source.
GRPHRSG	HRSG-1, HRSG-2	30 TAC Chapter 112, Sulfur Compounds	Steam generator which does not fire liquid or



### Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
			solid fuel.
GRPHRSG	HRSG-1, HRSG-2	40 CFR Part 60, Subpart Db	Steam generating units meeting the applicability requirements under Subpart Da (§ 60.40a) are not subject to this subpart.
GRPHRSGSTK	GTG/HRSG1, GTG/HRSG2, GTG/HRSG3	30 TAC Chapter 115, Vent Gas Controls	Vent gas stream originates from a combustion unit exhaust stream which is not used as a control device.
HRSG3	N/A	30 TAC Chapter 112, Sulfur Compounds	Exempt because the HRSG does not fire solid or liquid fuel
HRSG3	N/A	40 CFR Part 63, Subpart DDDDD	Exempt because the HRSG is not located at a major source of HAP emissions.
IBD-TK-001	N/A	30 TAC Chapter 115, Storage of VOCs	Does not store a VOC
IBD-TK-001	N/A	40 CFR Part 60, Subpart Kb	Does not store a VOL
LUBEOILFUG	N/A	30 TAC Chapter 115, Fugitives Pet Ref B Counties	Not located at a petroleum refinery, synthetic organic chemical, polymer, resin, or MTBE, or natural gas processing operation.
LUBEOILFUG	N/A	30 TAC Chapter 115, HRVOC Fugitive Emissions	Not located at a petroleum refinery, synthetic organic chemical, polymer, resin, or MTBE, or natural gas processing operation.
NH3FUG	N/A	30 TAC Chapter 115, Fugitives Pet Ref B Counties	Not located at a petroleum refinery, synthetic organic chemical, polymer, resin, or MTBE, or natural gas processing operation.
NH3FUG	N/A	30 TAC Chapter 115, HRVOC Fugitive Emissions	Not located at a petroleum refinery, synthetic organic chemical, polymer, resin, or MTBE, or natural gas processing operation.

### Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
OBD-TK-002	N/A	30 TAC Chapter 115, Storage of VOCs	Does not store a VOC.
OBD-TK-002	N/A	40 CFR Part 60, Subpart Kb	Does Not store a VOL.
OBD-TK-003	N/A	30 TAC Chapter 115, Vent Gas Controls	Does not store a VOC.
OBD-TK-003	N/A	40 CFR Part 60, Subpart Kb	Does not store a VOL.
OCF-TK-001	N/A	30 TAC Chapter 115, Storage of VOCs	Capacity <1000 gallons.
OCF-TK-001	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
OCF-TK-002AX	N/A	30 TAC Chapter 115, Storage of VOCs	Capacity < 1000 gallons.
OCF-TK-002AX	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
OCF-TK-003	N/A	30 TAC Chapter 115, Storage of VOCs	Capacity < 1000 gallons.
OCF-TK-003	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
OCF-TK-004	N/A	30 TAC Chapter 115, Storage of VOCs	Capacity < 1000 gallons.
OCF-TK-004	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
OCF-TK-004AX	N/A	30 TAC Chapter 115, Storage of VOCs	Capacity < 1000 gallons.
OCF-TK-004AX	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
OCF-TK-005	N/A	30 TAC Chapter 115, Storage of VOCs	Capacity < 1000 gallons.
OCF-TK-005	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
OCF-TK-007	N/A	30 TAC Chapter 115, Storage of VOCs	Capacity < 1000 gallons.
OCF-TK-007	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
OCF-TK-008	N/A	30 TAC Chapter 115, Storage of VOCs	Does not store a VOC.
OCF-TK-008	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.

### Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
OCF-TK-009	N/A	30 TAC Chapter 115, Storage of VOCs	Does not store a VOC.
OCF-TK-009	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
OCF-TK-010	N/A	30 TAC Chapter 115, Storage of VOCs	Not an EFR and VOC has TVP < 1.0 psia.
OCF-TK-010	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
OCH-TK-001	N/A	30 TAC Chapter 115, Storage of VOCs	Does not store a VOC.
OCH-TK-001	N/A	40 CFR Part 60, Subpart Kb	Does not store a VOL.
ODW-TK-001	N/A	30 TAC Chapter 115, Storage of VOCs	Does not store a VOC.
ODW-TK-001	N/A	40 CFR Part 60, Subpart Kb	Does not store a VOL.
ODW-TK-002	N/A	30 TAC Chapter 115, Storage of VOCs	Does not store a VOC.
ODW-TK-002	N/A	40 CFR Part 60, Subpart Kb	Does not store a VOL.
OILDEMIST	N/A	30 TAC Chapter 115, Fugitives Pet Ref B Counties	Not located at a petroleum refinery, synthetic organic chemical, polymer, resin, or MBTE, or natural gas/gasoline processing operation.
OILDEMIST	N/A	30 TAC Chapter 115, HRVOC Fugitive Emissions	Not located at a petroleum refinery, synthetic organic chemical, polymer, resin, or MBTE, or natural gas/gasoline processing operation.
TANK1	N/A	30 TAC Chapter 115, Storage of VOCs	Capacity < 1000 gallons.
TANK1	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
TANK10	N/A	30 TAC Chapter 115, Storage of VOCs	Does not store a VOC.
TANK10	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
TANK11	N/A	30 TAC Chapter 115, Storage of VOCs	Capacity < 1000 gallons.
TANK11	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.

### Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
TANK12	N/A	30 TAC Chapter 115, Storage of VOCs	Capacity < 1000 gallons.
TANK12	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
TANK13	N/A	30 TAC Chapter 115, Storage of VOCs	Does not store a VOC.
TANK13	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
TANK14	N/A	30 TAC Chapter 115, Storage of VOCs	Does not store a VOC.
TANK14	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
TANK15	N/A	30 TAC Chapter 115, Storage of VOCs	Capacity < 1000 gallons.
TANK15	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
TANK16	N/A	30 TAC Chapter 115, Storage of VOCs	Does not store a VOC.
TANK16	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
TANK2	N/A	30 TAC Chapter 115, Storage of VOCs	Capacity < 1000 gallons.
TANK2	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
TANK3	N/A	30 TAC Chapter 115, Storage of VOCs	Capacity < 1000 gallons.
TANK3	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
TANK4	N/A	30 TAC Chapter 115, Storage of VOCs	Capacity < 1000 gallons.
TANK4	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
TANK5	N/A	30 TAC Chapter 115, Storage of VOCs	Capacity < 100 gallons.
TANK5	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
TANK6	N/A	30 TAC Chapter 115, Storage of VOCs	Capacity < 1000 gallons.
TANK6	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.

### Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
TANK7	N/A	30 TAC Chapter 115, Storage of VOCs	Not an EFR and VOC has TVP, 1.0 psia
TANK7	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
TANK8	N/A	30 TAC Chapter 115, Storage of VOCs	Does not store a VOC.
TANK8	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
TANK9	N/A	30 TAC Chapter 115, Storage of VOCs	Does not store a VOC.
TANK9	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
TK-400	N/A	30 TAC Chapter 115, Storage of VOCs	Does not store a VOC.
TK-400	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.
TK-410	N/A	30 TAC Chapter 115, Storage of VOCs	Not an EFR and VOC has TVP < 1.0 psia
TK-410	N/A	40 CFR Part 60, Subpart Kb	Capacity < 19,800 gallons.

**New Source Review Authorization References**

<b>New Source Review Authorization References .....</b>	<b>81</b>
<b>New Source Review Authorization References by Emission Unit .....</b>	<b>82</b>

### New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

<b>Prevention of Significant Deterioration (PSD) Permits</b>	
PSD Permit No.: PSDTX955GHG	Issuance Date: 11/29/2012
PSD Permit No.: PSDTX955M1	Issuance Date: 01/24/2017
<b>Nonattainment (NA) Permits</b>	
NA Permit No.: N021M1	Issuance Date: 01/24/2017
<b>Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.</b>	
Authorization No.: 42179	Issuance Date: 01/24/2017
Authorization No.: 156050	Issuance Date: 04/25/2019
<b>Permits By Rule (30 TAC Chapter 106) for the Application Area</b>	
Number: 106.227	Version No./Date: 09/04/2000
Number: 106.262	Version No./Date: 09/04/2000
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.265	Version No./Date: 09/04/2000
Number: 106.371	Version No./Date: 09/04/2000
Number: 106.412	Version No./Date: 09/04/2000
Number: 106.452	Version No./Date: 09/04/2000
Number: 106.454	Version No./Date: 09/04/2000
Number: 106.472	Version No./Date: 09/04/2000
Number: 106.474	Version No./Date: 09/04/2000
Number: 106.477	Version No./Date: 09/04/2000
Number: 106.511	Version No./Date: 09/04/2000
Number: 106.532	Version No./Date: 09/04/2000

### New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
AUXBOIL1	AUXILIARY BOILER STACK	42179, N021M1, PSDTX955M1
AUXBOIL2	AUXILIARY BOILER STACK	42179, N021M1, PSDTX955M1
AUXBOIL-3	AUXILIARY BOILER STACK	42179, N021M1, PSDTX955M1
B-1	AUXILIARY BOILER	42179, N021M1, PSDTX955M1
B-2	AUXILIARY BOILER	42179, N021M1, PSDTX955M1
B-3	AUXILIARY BOILER	42179, N021M1, PSDTX955M1
COOLTWR1	COOLING TOWER NO. 1	42179, N021M1, PSDTX955M1
CTG3	COMBUSTION TURBINE 3	42179, N021M1, PSDTX955M1
CW-500	CLARIFIED WATER TANK	106.472/09/04/2000
DEG-1	DEGREASER	106.454/09/04/2000
EMENG1	PROPANE-FIRED EMERGENCY GENERATOR	106.511/09/04/2000
EMENG1STK	PROPANE-FIRED EMERGENCY GENERATOR STACK	106.511/09/04/2000
EMENG2	PROPANE-FIRED EMERGENCY GENERATOR	106.511/09/04/2000
EMENG2STK	PROPANE-FIRED EMERGENCY GENERATOR STACK	106.511/09/04/2000
EMERGAIRCOMP	EMERGENCY ENGINE	106.511/09/04/2000
FUELGASFUG	FUEL GAS SYSTEM FUGITIVES	42179, N021M1, PSDTX955M1
GTG/HRSG1	COGENERATION TRAIN STACK	42179, N021M1, PSDTX955M1
GTG/HRSG2	COGENERATION TRAIN STACK	42179, N021M1, PSDTX955M1
GTG/HRSG3	CTG/HRSG STACK 3	42179, N021M1, PSDTX955M1
GTG-1	TURBINE	42179, N021M1, PSDTX955M1
GTG-2	TURBINE	42179, N021M1, PSDTX955M1



### New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
HRSG-1	HEAT RECOVERY STEAM GENERATOR	42179, N021M1, PSDTX955M1
HRSG-2	HEAT RECOVERY STEAM GENERATOR	42179, N021M1, PSDTX955M1
HRSG3	HEAT RECOVERY STEAM GENERATOR 3	42179, N021M1, PSDTX955M1
IBD-TK-001	BLOWDOWN TANK	106.472/09/04/2000
LUBEOILFUG	LUBRICATING OIL SYSTEM FUGITIVES	42179, N021M1, PSDTX955M1
NH3FUG	AMMONIA FUGITIVES	42179, N021M1, PSDTX955M1
OBD-TK-002	AUXILIARY BOILER BLOWDOWN TANK	106.472/09/04/2000
OBD-TK-003	AUXILIARY BOILER BLOWDOWN TANK	106.472/09/04/2000
OCF-TK-001	PHOSPHATE/POLYMER UP BLEND	106.472/09/04/2000
OCF-TK-002AX	OXYGEN SCAVENGER STORAGE TANK	106.472/09/04/2000
OCF-TK-003	OXYGEN SCAVENGER STORAGE TANK	106.472/09/04/2000
OCF-TK-004AX	NEUTRALIZING AMINE STORAGE TANK	106.472/09/04/2000
OCF-TK-004	CORROSION INHIBITOR TANK	106.262/09/04/2000, 106.472/09/04/2000
OCF-TK-005	PHOSPHATE/POLYMER TANK	106.472/09/04/2000
OCF-TK-007	SODIUM HYPOCHLORITE TANK	106.472/09/04/2000
OCF-TK-008	CORROSION INHIBITOR TANK	106.472/09/04/2000
OCF-TK-009	SULFURIC ACID TANK	106.472/09/04/2000
OCF-TK-010	DREW 11-729 TANK	106.472/09/04/2000
OCH-TK-001	CYCLE MAKE UP WATER TANK	106.472/09/04/2000
ODW-TK-001	DEMINERALIZED WATER TANK	106.472/09/04/2000
ODW-TK-002	DEMINERALIZED WATER TANK	106.472/09/04/2000

### New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
OILDEMIST	OIL MIST ELIMINATOR FUGITIVES	42179, N021M1, PSDTX955M1
TANK10	PHOSPHATE STORAGE TANK	106.472/09/04/2000
TANK11	ANTIFOULANT TANK	106.472/09/04/2000
TANK12	ANTIFOULANT TANK	106.472/09/04/2000
TANK13	HYDROCHLORIC ACID TANK	106.472/09/04/2000
TANK14	CAUSTIC STORAGE TANK	106.472/09/04/2000
TANK15	CORROSION INHIBITOR TANK	106.472/09/04/2000
TANK16	SULFURIC ACID TANK	106.472/09/04/2000
TANK1	OIL DRUM	106.472/09/04/2000
TANK2	OIL DRUM	106.472/09/04/2000
TANK3	OIL DRUM	106.472/09/04/2000
TANK4	OIL DRUM	106.472/09/04/2000
TANK5	OIL DRUM	106.472/09/04/2000
TANK6	OIL DRUM	106.472/09/04/2000
TANK7	LUBE OIL RESERVOIRS	106.472/09/04/2000
TANK8	PHOSPHATE STORAGE TANK	106.472/09/04/2000
TANK9	PHOSPHATE STORAGE TANK	106.472/09/04/2000
TK-400	SODIUM HYPOCHLORITE TANK	106.472/09/04/2000
TK-410	POLYMER TANK	106.472/09/04/2000

**Appendix A**

**Acronym List ..... 86**

## Acronym List

The following abbreviations or acronyms may be used in this permit:

ACFM	actual cubic feet per minute
AMOC	alternate means of control
ARP	Acid Rain Program
ASTM	American Society of Testing and Materials
B/PA	Beaumont/Port Arthur (nonattainment area)
CAM	Compliance Assurance Monitoring
CD	control device
CEMS	continuous emissions monitoring system
CFR	Code of Federal Regulations
COMS	continuous opacity monitoring system
CVS	closed vent system
D/FW	Dallas/Fort Worth (nonattainment area)
EP	emission point
EPA	U.S. Environmental Protection Agency
EU	emission unit
FCAA Amendments	Federal Clean Air Act Amendments
FOP	federal operating permit
gr/100 scf	grains per 100 standard cubic feet
HAP	hazardous air pollutant
H/G/B	Houston/Galveston/Brazoria (nonattainment area)
H <sub>2</sub> S	hydrogen sulfide
ID No.	identification number
lb/hr	pound(s) per hour
MACT	Maximum Achievable Control Technology (40 CFR Part 63)
MMBtu/hr	Million British thermal units per hour
NA	nonattainment
N/A	not applicable
NADB	National Allowance Data Base
NESHAP	National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61)
NO <sub>x</sub>	nitrogen oxides
NSPS	New Source Performance Standard (40 CFR Part 60)
NSR	New Source Review
ORIS	Office of Regulatory Information Systems
Pb	lead
PBR	Permit By Rule
PEMS	predictive emissions monitoring system
PM	particulate matter
ppmv	parts per million by volume
PRO	process unit
PSD	prevention of significant deterioration
psia	pounds per square inch absolute
SIP	state implementation plan
SO <sub>2</sub>	sulfur dioxide
TCEQ	Texas Commission on Environmental Quality
TSP	total suspended particulate
TVP	true vapor pressure
U.S.C.	United States Code
VOC	volatile organic compound

**Appendix B**

**Major NSR Summary Table ..... 88**

**Major NSR Summary Table**

Permit Numbers 42179, PSDTX955M1, N021M1					Issuance Date: January 24, 2017		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hr (6)	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
Hourly Emission Rates - Turbines and Duct Burners							
GTG/HRSG1	Turbine/HRSG No. 1 Siemens 501F (180 MW) + 475 MMBtu/hr DB	NO <sub>x</sub> (5)	32.1	-	7, 13, 14, 15, 16, 17, 18, 19, 20, 21, 26, 27, 28, 30	7, 13, 15, 16, 18, 19, 20, 21, 26, 27, 28, 30, 31, 32	13, 15, 16
		NO <sub>x</sub> (MSS)	350.0	-			
		CO	346.0	-			
		CO (MSS)	3200.0	-			
		VOC	26.9	-			
		VOC (MSS)	183.5	-			
		PM <sub>10</sub>	29.4	-			
		SO <sub>2</sub>	31.4	-			
		NH <sub>3</sub>	28.0	-			
		NH <sub>3</sub> (MSS)	50.0	-			
		H <sub>2</sub> SO <sub>4</sub>	4.8	-			
GTG/HRSG2	Turbine/HRSG No. 2	NO <sub>x</sub> (5)	32.1	-			13, 15, 16

**Major NSR Summary Table**

Permit Numbers 42179, PSDTX955M1, N021M1					Issuance Date: January 24, 2017		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hr (6)	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
	Siemens 501F (180MW) + 475 MMBtu/hr DB	NO <sub>x</sub> (MSS)	350.0	-	7, 13, 14, 15, 16, 17, 18, 19, 20, 21, 26, 27, 28, 30	7, 13, 15, 16, 18, 19, 20, 21, 26, 27, 28, 30, 31, 32	
		CO	346.0	-			
		CO (MSS)	3200.0	-			
		VOC	26.9	-			
		VOC (MSS)	183.5	-			
		PM <sub>10</sub>	29.4	-			
		SO <sub>2</sub>	31.4	-			
		NH <sub>3</sub>	28.0	-			
		NH <sub>3</sub> (MSS)	50.0	-			
		H <sub>2</sub> SO <sub>4</sub>	4.8	-			
Hourly Emission Rates - Auxiliary Boilers							
AUXBOIL 1	Auxiliary Steam Boiler No. 1 430 MMBtu/hr	NO <sub>x</sub> (5)	22.8	-	13, 14, 15, 16, 17, 18, 19, 20, 21, 26, 27, 28, 30	13, 15, 16, 18, 19, 20, 21, 26, 27, 28, 30, 31, 32	13, 15, 16
		CO	26.2	-			

**Major NSR Summary Table**

Permit Numbers 42179, PSDTX955M1, N021M1					Issuance Date: January 24, 2017		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hr (6)	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		CO (MSS)	31.4	-			
		VOC	7.6	-			
		VOC (MSS)	9.1	-			
		PM <sub>10</sub>	7.6	-			
		SO <sub>2</sub>	6.2	-			
		NH <sub>3</sub>	1.4	-			
		H <sub>2</sub> SO <sub>4</sub>	1.0	-			
AUXBOIL 2	Auxiliary Steam Boiler No. 2 430 MMBtu/hr	NO <sub>x</sub> (5)	22.8	-	13, 14, 15, 16, 17, 18, 19, 20, 21, 26, 27, 28, 30	13, 15, 16, 18, 19, 20, 21, 26, 27, 28, 30, 31, 32	13, 15, 16
		CO	26.2	-			
		CO (MSS)	31.4	-			
		VOC	7.6	-			
		VOC (MSS)	9.1	-			
		PM <sub>10</sub>	7.6	-			
		SO <sub>2</sub>	6.2	-			



**Major NSR Summary Table**

Permit Numbers 42179, PSDTX955M1, N021M1					Issuance Date: January 24, 2017		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hr (6)	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		NH <sub>3</sub>	1.4	-			
		H <sub>2</sub> SO <sub>4</sub>	1.0	-			

Major NSR Summary Table

Permit Numbers 42179, PSDTX955M1, N021M1					Issuance Date: January 24, 2017		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hr (6)	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
AUXBOIL 3	Auxiliary Steam Boiler No. 3 430 MMBtu/hr	NO <sub>x</sub> (5)	22.8	-	13, 14, 15, 16, 17, 18, 19, 20, 21, 26, 27, 28, 30	13, 15, 16, 18, 19, 20, 21, 26, 27, 28, 30, 31, 32	13, 15, 16
		CO	26.2	-			
		CO (MSS)	31.4	-			
		VOC	7.6	-			
		VOC (MSS)	9.1	-			
		PM <sub>10</sub>	7.6	-			
		SO <sub>2</sub>	6.2	-			
		NH <sub>3</sub>	1.4	-			
		H <sub>2</sub> SO <sub>4</sub>	1.0	-			
Combined Annual Emission Rates - Turbines, Duct Burners, and Auxiliary Boilers							
GTG/HRSG 1, GTG/HRSG 2, AUXBOIL1, AUXBOIL2, & AUXBOIL3	Turbine/HRSG 1 - 2 and Auxiliary Boilers 1-3	NO <sub>x</sub>	-	268.0	7, 13, 14, 15, 16, 17, 18, 19, 20, 21, 26, 27, 28	7, 13, 15, 16, 18, 19, 20, 21, 26, 27, 28, 31, 32	13, 15, 16
		CO	-	937.0			
		VOC	-	102.0			

**Major NSR Summary Table**

Permit Numbers 42179, PSDTX955M1, N021M1					Issuance Date: January 24, 2017		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hr (6)	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		PM <sub>10</sub>	-	180.0			
		SO <sub>2</sub>	-	22.5			
		NH <sub>3</sub>	-	237.8			
		H <sub>2</sub> SO <sub>4</sub>	-	3.4			
GTG/HRSG3	Turbine/HRSG No. 3 Siemens 501F (180 MW) + 475 MMBtu/hr DB  FD2 Option	NO <sub>x</sub>	18.0	61.5	7, 13, 14, 15, 16, 17, 18, 19, 20, 21, 26, 27, 28, 30	7, 13, 15, 16, 18, 19, 20, 21, 26, 27, 28, 30, 31, 32	13, 15, 16, 36
		NO <sub>x</sub> (MSS)	350.0	-			
		CO	236.0	231			
		CO (MSS)	3200.0	-			
		VOC	19.3	22.1			
		VOC (MSS)	183.5	-			
		PM	27.0	72.4			
		PM <sub>10</sub>	27.0	72.4			
		PM <sub>2.5</sub>	27.0	72.4			

**Major NSR Summary Table**

Permit Numbers 42179, PSDTX955M1, N021M1					Issuance Date: January 24, 2017		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hr (6)	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		SO <sub>2</sub>	33.6				
		NH <sub>3</sub>	23.3	61.9			
		NH <sub>3</sub> (MSS)	50.0	-			
		H <sub>2</sub> SO <sub>4</sub>	5.14	0.92			
GTG/HRSG3	Turbine/HRSG No. 3 Siemens 501F (180 MW) + 475 MMBtu/hr DB  FD3 Option	NO <sub>x</sub>	18.0	62.7	7, 13, 14, 15, 16, 17, 18, 19, 20, 21, 26, 27, 28, 30	7, 13, 15, 16, 18, 19, 20, 21, 26, 27, 28, 30, 31, 32	13, 15, 16, 36
		NO <sub>x</sub> (MSS)	350.0	-			
		CO	246.9	232.1			
		CO (MSS)	3200.0	-			
		VOC	19.6	22.3			
		VOC (MSS)	183.5	-			
		PM	28.4	72.5			
		PM <sub>10</sub>	28.4	72.5			
		PM <sub>2.5</sub>	28.4	72.5			

**Major NSR Summary Table**

Permit Numbers 42179, PSDTX955M1, N021M1					Issuance Date: January 24, 2017		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hr (6)	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		SO2	33.6	5.9			
		NH3	23.3	63.4			
		NH3 (MSS)	50.0	-			
		H2SO4	5.14	0.94			
Additional Sources							
COOLTWR1	Cooling Tower 1 (7)	PM10	1.33	3.50	22	22, 31, 32	
LUBEOILFUG	Lubricating Oil Systems Fugitives (7, 8)	VOC	0.11	0.47		31, 32	
FUELGASFUG	Fuel Gas System (7, 8)	VOC	0.50	2.18		31, 32	
NH3FUG	Ammonia Fugitives (7, 8)	NH3	0.25	1.08	10, 11	10, 11, 31, 32	
OILDEMIST	Oil Mist Eliminator (All turbines) (7)	VOC	0.03	0.11		31	
TK-004	Americor 1,000-Gallon Storage Tank (7)	VOC	<0.01	<0.01		31	
TK-004AX	Americor 1,000-Gallon Storage Tank (7)	VOC	<0.01	<0.01		31	

**Major NSR Summary Table**

Permit Numbers 42179, PSDTX955M1, N021M1					Issuance Date: January 24, 2017		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hr (6)	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
MSSFUG	MSS-Related Fugitives (8)	NO <sub>x</sub>	<0.01	<0.01	27, 28, 30	27, 28, 30, 31, 32	
		CO	<0.01	<0.01			
		VOC	4.25	0.03			
		PM <sub>10</sub>	0.22	0.03			
		PM <sub>2.5</sub>	0.22	0.03			
		NH <sub>3</sub>	2.66	<0.01			

Footnotes:

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.

(2) Specific point source name. For fugitive sources, use area name or fugitive source name.

(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1

NO<sub>x</sub> - total oxides of nitrogen

SO<sub>2</sub> - sulfur dioxide

PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented

PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter

CO - carbon monoxide

NH<sub>3</sub> - ammonia

H<sub>2</sub>SO<sub>4</sub> - sulfuric acid

MSS - maintenance, startup, and shutdown

(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.

(5) The maximum pound per hour (lb/hr) NO<sub>x</sub> emission rate is based on a rolling three-hour average.

(6) Planned MSS lb/hr emissions for all pollutants are authorized even if not specifically identified as MSS. During any clock hour that includes one or more minutes of planned MSS activities, that pollutant's maximum hourly emission rate shall apply during that clock hour.

- (7) The lb/hr and tpy emission limits specified in the table entitled "Emission Sources - Maximum Allowable Emission Rates" for this facility include emission from the facility during both normal operations and planned MSS activities.
- (8) Fugitive emissions are an estimate only and should not be considered as maximum allowable emission rates.

**Major NSR Summary Table**

Permit Number: PSD-TX-955-GHG					Issuance Date: November 29, 2012		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			TPY <sup>1,2,3</sup>	TPY CO <sub>2e</sub> <sup>2,3</sup>	Special Condition/Application Information	Special Condition/Applicati on Information	Special Condition/Applicati on Information
Phase 1 of Construction							
CTG3 (FD2) /HRSG3	CTG3/HRSG3 Annual Emissions	CO <sub>2</sub>	984,393 0.460 tons/MWh 7,730 Btu/KWh	985,340	II.B.1. II.B.2. II.B.3. II.B.4. III.A., G V.A, C, E, F, G, H, I J, L, M	II.B.1. II.B.2. II.B.3 II.B.4. III.A., B, C, D, E, G, H, K V.C, H, J	III.H V.C, E, H, K VI.
		CH <sub>4</sub>	18.22		II.B.3. II.B.4. III.A,G. V.A, G, H, L, M	II.B.3. II.B.4. III.A., B, C, D, E, G, H, K V.C,H, J	III.H, V.H,K, VI.
		N <sub>2</sub> O	1.82		II.B.3. II.B.4. III.A. V.A,G, H, L, M	II.B.3. II.B.4. III.A., B, C, D, E, G, H, K V.C,H,J	III.H, V.H,K VI.
NG-FUG/Fuel Gas Piping	Fugitive Natural Gas emissions from piping components & Fuel Gas Piping	CO <sub>2</sub>	0.29	0.29	II.C.2 III.F	II.B.3, II.C.2 III.F, G, K	VI.
		CH <sub>4</sub> <sup>(4)</sup>	7.44	156.23	II.C.2	II.C.2, III.F,G,K	VI.
SF-6 - FUG	SF <sub>6</sub> Insulated Electrical Equipment	SF <sub>6</sub>	0.00018	4.3		II.B.3, II.C.2 III.K	VI.



**Major NSR Summary Table**

Permit Number: PSD-TX-955-GHG					Issuance Date: November 29, 2012		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			TPY <sup>1,2,3</sup>	TPY CO <sub>2</sub> e <sup>2,3</sup>	Special Condition/Application Information	Special Condition/Applicati on Information	Special Condition/Applicati on Information
Phase 2 of Construction							
CTG3 (FD3)/ HRSG3	CTG3/HRSG3 Annual Emissions	CO <sub>2</sub>	1,002,391 0.460 tons/MWh 7,730 Btu/KWh	1,003,355	II.B.1 II.B.2 II.B.3 II.B.4 III.A., G V.B, D, E, F, G, H, K, J, L, M	II.A, II.B.1 II.B.2 II.B.3 II.B.4 III.A., B, C, D, E, G, H, K V.D,H,J	V.D, E, H, K VI.
		CH <sub>4</sub>	18.55		II.B.3 II.B.4 III.A, G V.B,G,H,L,M,	II.B.3 II.B.4 III.A., B, C, D, E, G, H, K V.D,H,J	V.H, K, VI.
		N <sub>2</sub> O	1.86		II.B.3 II.B.4 III.A. V.B,G,H,L,M,	II.B.3 II.B.4. III.A. , B, C, D, E, G, H, K V.D,H,J	V.H, K, VI.
NG-FUG/Fuel Gas Piping	Fugitive Natural Gas emissions from piping components & Fuel Gas Piping	CO <sub>2</sub>	0.29	0.29	II.C.2 III.F. V.G.	II.C.2, III.F,G,K	VI.
		CH <sub>4</sub> <sup>(4)</sup>	7.44	157	II.C.2 III.F.	II.C.2 III.F, G,K,	I.F VI.
SF-6 - FUG	SF <sub>6</sub> Insulated Electrical Equipment	SF <sub>6</sub>	0.00018	4.30		II.C.2 III.K	VI.

Footnotes:

- (1) Compliance with the output-based emission limits (on a per-hour basis) is based on a 30-day rolling average and excludes duct burner firing.
- (2) Compliance with the annual emission limits (tons per year) is based on a 365-day rolling average.
- (3) The TPY emission limits specified in this table are not to be exceeded for this facility and include emissions only from the facility during normal operations and startup and shutdown activities.

- (4) Because the emissions from this unit are calculated to be 96% methane (CH<sub>4</sub>), the remaining pollutant emission (CO<sub>2</sub>) is not presented in the table.
- (5) Because the emission from this unit are calculated to be over 99.9% carbon dioxide (CO<sub>2</sub>), the remaining pollutant emission (CH<sub>4</sub> and N<sub>2</sub>O) are not presented in the table.



## Texas Commission on Environmental Quality Air Quality Permit

*A Permit Is Hereby Issued To*  
**Channel Energy Center, LLC**  
*Authorizing the Construction and Operation of*  
**Channel Energy Center**  
*Located at Pasadena, Harris County, Texas*  
Latitude 29° 43' 8" Longitude -95° 13' 55"

Permits: 42179, N021M1, and PSDTX955M1

Revision Date: January 24, 2017

Expiration Date: July 29, 2020

A handwritten signature in black ink, appearing to read "R. D. A. Hyle".

For the Commission

1. **Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code (TAC) Section 116.116 (30 TAC § 116.116)]<sup>1</sup>
2. **Voiding of Permit.** A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1) the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10 percent of the estimated total cost of the project up to a maximum of \$5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC § 116.120]
3. **Construction Progress.** Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC § 116.115(b)(2)(A)]
4. **Start-up Notification.** The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC § 116.115(b)(2)(B)]
5. **Sampling Requirements.** If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC § 116.115(b)(2)(C)]

6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC § 116.115(b)(2)(D)]
7. **Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction in a timely manner; comply with any additional recordkeeping requirements specified in special conditions in the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC § 116.115(b)(2)(E)]
8. **Maximum Allowable Emission Rates.** The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC § 116.115(b)(2)(F)]<sup>1</sup>
9. **Maintenance of Emission Control.** The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification in accordance with 30 TAC §101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC§ 116.115(b)(2)(G)]
10. **Compliance with Rules.** Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC § 116.115(b)(2)(H)]
11. **This** permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC § 116.110(e)]
12. **There** may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC § 116.115(c)]
13. **Emissions** from this facility must not cause or contribute to "air pollution" as defined in Texas Health and Safety Code (THSC) §382.003(3) or violate THSC § 382.085. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
14. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit.<sup>1</sup>

<sup>1</sup> Please be advised that the requirements of this provision of the general conditions may not be applicable to greenhouse gas emissions.

## **Special Conditions**

Permit Numbers 42179, PSDTX955M1, and NO21M1

### **Emission Standards and Operating Specifications**

1. Fuel for the gas turbine generators (GTG), heat recovery steam generating duct burners (HRSG), and auxiliary boilers authorized by this permit shall be limited to firing the following fuels:
  - A. Pipeline-quality natural gas containing no more than 5.0 grains (gr) total sulfur (hourly basis) and 0.25 gr (annual basis) total sulfur per 100 dry standard cubic feet (dscf).
  - B. Refinery fuel gas from the adjacent refinery containing no more than 5.0 gr total sulfur per 100 dscf on an hourly basis. **(12/11)**
  - C. Mixtures of pipeline-quality natural gas and refinery gas from the adjacent refinery that meet the hourly limitations of Special Condition Nos. 1A and 1B and that do not exceed an annual average of 0.473 gr of total sulfur per 100 dscf.
  - D. Firing of any other fuel will require authorization from the permitting authority.

### **Auxiliary Boiler Emission Standards and Operations**

2. Emissions from the Auxiliary Boilers [Emission Point Numbers (EPNs): AUXBOIL 1, AUXBOIL 2 and AUXBOIL 3] shall not exceed the following emission limits when firing at a rate greater than minimum fire, defined as between 13 and 70 million British thermal units per hour (MMBtu/hr), on the main burner mode except during periods of planned maintenance, startup, or shutdown (MSS): **(6/12)**
  - A. Nitrogen oxides (NO<sub>x</sub>): 0.015 pound per million British thermal units (lb/MMBtu) corrected to 3 percent oxygen (% O<sub>2</sub>) on a one-hour average and 0.011 lb/MMBtu corrected to 3% O<sub>2</sub> on a rolling 12-month average. **(6/12)**
  - B. Carbon monoxide (CO): 50 parts per million dry (ppmvd) corrected to 3% O<sub>2</sub> on a 24-hr average. **(6/12)**
3. Each of the auxiliary boilers shall be limited to a maximum heat input capacity of 430 MMBtu/hr based on the higher heating value (HHV) of the fuel fired. **(6/12)**

### **GTG and HRSG Emission Standards and Operation**

4. The duct burner fired HRSGs shall each be limited to a maximum heat input capacity of 475 MMBtu/hr based on the HHV of the fuel fired. In addition, the following limitations apply to GTG/HRSG operations:
  - A. Each turbine's normal operating range is from 60 to 100 percent of base load except for periods of planned MSS. **(12/11)**
  - B. Steam augmentation or reduced load operation below base load not associated with planned MSS is authorized, provided the NO<sub>x</sub> and CO maximum emission rates

specified in the MAERT for EPNs: GTG/HRSG1 or GTG/HRSG2 are not exceeded.  
**(12/11)**

5. Emission limitations for EPNs GTG/HRSG1 and GTG/HRSG2 **(4/16)**

- A. The concentration of NO<sub>x</sub> shall not exceed 3.5 ppmvd corrected to 15 % O<sub>2</sub>, on a 3-hour rolling average when operating from 60 to 100 percent of the base load. The following are not to be included in the calculation of the concentration limit:
- (a) Startup and Shutdown emissions (Special Condition No. 23).
  - (b) Emissions from maintenance activities (Attachment B).
  - (c) Excess emissions caused by emission events.

6. Emission limitations for EPN GTG/HRSG3 **(10/12)**

- A. The concentration of NO<sub>x</sub> shall not exceed 2 ppmvd corrected to 15 % O<sub>2</sub>, on a 3-hour rolling average when operating from 60 to 100 percent of the base load. The following are not to be included in the calculation of the concentration limit:
- (a) Startup and Shutdown emissions (Special Condition No. 23).
  - (b) Emissions from maintenance activities (Attachment B).
  - (c) Excess emissions caused by emission events.
- B. The concentration of CO shall not exceed 4 ppmvd corrected to 15 % O<sub>2</sub>, on a rolling 24-hour average. The following are not to be included in the calculation of the concentration limit:
- (a) Startup and Shutdown emissions (Special Condition No. 23).
  - (b) Emissions from maintenance activities (Attachment B).
  - (c) Excess emissions caused by emission events.
  - (d) Hours of power augmentation. These hours are limited to no more than 500 hours per year. Additional power augmentation may occur provided it is not excluded from the calculation of the concentration limit.
- C. During hours of startup, shutdown, and power augmentation, the pounds per hour emission rates specified in the MAERT for NO<sub>x</sub> and CO still apply.
- D. Reduced load operation below base load not associated with planned MSS is authorized, provided the NO<sub>x</sub> and CO maximum emission rates specified in the MAERT are not exceeded

7. Opacity of emissions from each stack or vent shall not exceed five percent averaged over a six-minute period, except during periods of MSS. The opacity shall not exceed 15 percent averaged over a six-minute period during periods of MSS.

- A. Each determination shall be made by observing for visible emissions while each facility is in operation. Observations shall be made at least 15 feet and no more than 0.25 miles from the emission point.
  - B. If visible emissions are observed from an emission point, then the presence of visible emissions shall be documented for that observation, and corrective action must be taken to eliminate the visible emissions within 24 hours.
  - C. If the corrective action fails to eliminate the visible emissions within 24 hours of first observing the visible emissions, an opacity reading using Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60), Appendix A, Test Method 9 must be conducted and the results documented.
  - D. Contributions from uncombined water shall not be included in determining compliance with this condition. Observations shall be performed and recorded quarterly. **(12/11)**
8. The water circulating in the cooling tower (EPN: COOLTWR1) shall not exceed a total dissolved solids (TDS) concentration of 5,000 parts per million by weight (ppmw).

**Anhydrous Ammonia (NH<sub>3</sub>)**

9. Concentrations of NH<sub>3</sub> in the exhaust of the following EPNs are as follows:
- A. EPNs: GTG/HRSG1 and GTG/HRSG2 shall not exceed 10 ppmvd (hourly average) corrected to 15 % O<sub>2</sub> except during periods of planned MSS. EPN GTG/HRSG3 shall not exceed 7 ppmvd (rolling 24 hour average) corrected to 15 % O<sub>2</sub> except during periods of planned MSS. **(10/12)**
  - B. EPNs: AUXBOIL1, AUXBOIL2, and AUXBOIL3 shall not exceed 10 ppmvd (hourly average) corrected to 3 % O<sub>2</sub> except during periods of planned MSS. **(6/12)**
10. The permit holder is authorized to maintain and operate two 12,500 gallon tanks of anhydrous NH<sub>3</sub> on-site. Additionally, the permit holder shall maintain prevention and protection measures for the NH<sub>3</sub> storage system as represented in the permit application which includes (but is not limited to) the following:
- A. The NH<sub>3</sub> storage tank area will be marked and secured so as to protect the NH<sub>3</sub> storage tank from accidents that could cause a rupture.
  - B. A water deluge system shall be installed to cover the tank and loading area to mitigate any airborne releases of NH<sub>3</sub>. The water deluge system must activate when an ambient safety sensor level of 200 ppmv of NH<sub>3</sub> is detected.
  - C. The permit holder shall follow the mitigation procedures set out in the risk management plan with regard to anhydrous ammonia, as required by 40 CFR Part 68.
11. The permit holder shall maintain the piping and valves in NH<sub>3</sub> service as follows:

- A. All operating practices and procedures relating to the handling and storage of  $\text{NH}_3$  shall conform to the safety recommendations specified for that compound by guidelines of the American National Standards Institute and the Compressed Gas Association.
- B. Audio, olfactory, and visual checks for  $\text{NH}_3$  leaks within the operating area shall be made every 12 hours. If the site is utilizing 12-hour shifts, conducting the checks once per shift is sufficient to meet this condition. **(4/16)**
- C. As soon as practicable, following the detection of a leak, plant personnel shall take one or more of the following actions:
  - (1) Locate and isolate the leak, if necessary.
  - (2) Commence repair or replacement of the leaking component.
  - (3) Use a leak collection/containment system to control the leak until repair or replacement can be made if immediate repair is not possible.

12. Nonattainment New Source Review (NNSR) - Emission Reductions

- A. The initial NNSR permit was issued based on the permanent retirement of Texas Commission on Environmental Quality (TCEQ) Emission Reduction Credit Certificate (ERCC) Nos. 1315, 1317, 1318, 1324, and 1325 for 483.6 tons per year (tpy) of emissions of  $\text{NO}_x$ . Those ERCC provided offsets at the rate of 1.3:1.0 for the 372 tpy of  $\text{NO}_x$  emissions authorized under this permit.

This NNSR permit is issued based on the permanent retirement of TCEQ ERCC Nos. 1279, 1313, and 1327 for 190.3 tpy of volatile organic compounds (VOC). This ERCC provides offsets at the rate of 1.3:1.0 for the 146.4 tpy of VOC emissions authorized under this permit.

- B. The NNSR major modification to authorize the installation and operation of the Siemens FD2 option for GTG/HRSG3 will require 80.0 tons per year (tpy) of emissions reduction credits (ERCs) of  $\text{NO}_x$  upon start of operation of the facility. These ERCs provide offsets at the rate of 1.3:1.0 for the 61.5 tpy of  $\text{NO}_x$  increases authorized under this modification. The permit holder shall provide additional offsets in the amount of 1.6 tpy prior to the start of operation of the upgraded Siemens FD3 combustion turbine based on increased authorized allowable  $\text{NO}_x$  emissions of 1.2 tpy at an offset ratio of 1.3:1. **(1/17)**

The permittee may satisfy the 1:1 portion of the offset through use of emission reduction credits (ERCs) and/or participation in the Mass Emission Cap and Trade (MECT) Program and the 0.3 portion shall either be ERCs, discrete emission reduction credits (DERCs), or obtained from MECT. If the permittee chooses to use MECT allowances for the 0.3 portion of the offset, the MECT allowances shall be permanently retired prior to start of operation of the source.

If participation in the MECT program is used for any part of the 1:1 portion of the offset, at the beginning of the MECT compliance period in which a source will commence operation and at the beginning of each MECT compliance period after



that, the permittee must have sufficient MECT allowances to cover the potential to emit of that source or the portion of the potential to emit being offset through participation in the MECT program. **(10/12)**

All offsets used to satisfy this condition will be located within the Harris-Galveston-Brazoria Area and will be federally enforceable and accounted for through the TCEQ Emissions Banking and Trading Team.

### **Federal Applicability**

13. These facilities shall comply with applicable requirements of the United States Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources (NSPS) 40 CFR Part 60 promulgated for:
  - A. Subpart A: General Conditions.
  - B. Subpart Da: Standards of Performance for Electric Utility Steam Generating Units. [The duct burner-fired HRSGs associated with Gas Turbine Numbers 1 and 2 (EPNs: GTG/HRSG1 and GTG/HRSG2)]
  - C. Subpart Db: Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. (auxiliary boilers)
  - D. Subpart GG: Standards of Performance for Stationary Gas Turbines. [Gas turbine Numbers 1 and 2 (EPNs: GTG/HRSG1 and GTG/HRSG2)]
  - E. Subpart KKKK: Standards of Performance for Stationary Gas Turbines. [Gas turbine Number 3 (EPN GTG/HRSG3)] **(10/12)**

### **Initial Determination of Compliance**

14. The holder of this permit is responsible for providing safe sampling and testing facilities and conducting the sampling and testing operations at the holder's expense.
15. Upon request from the TCEQ Regional Office, the holder of this permit shall perform stack sampling and other testing as required to establish the actual quantities of air contaminants being emitted into the atmosphere from EPNs: GTG/HRSG1, GTG/HRSG2, AUXBOIL1, AUXBOIL2, and AUXBOIL3. The holder of this permit shall sample GTG/HRSG3 according to this special condition. Sampling of at least one of the above cogeneration trains and one of the above auxiliary boilers shall be conducted while firing mixtures of natural gas and refinery gas. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with the appropriate EPA Reference Methods 201A and 202 or Reference Method 5, modified to include back half condensables, for particulate matter less than 10 microns in diameter (PM<sub>10</sub>); Reference Method 8 or Reference Methods 6 or 6c for sulfur dioxide (SO<sub>2</sub>); Reference Method 9 for opacity (consisting of 30 six minute readings as provided in 40 CFR §60.11[b]); Reference Method 10 for CO, Reference Method 25A, with Method 18

to exclude methane and ethane, for VOC (to measure total carbon as propane); and Reference Method 20 for NO<sub>x</sub> and O<sub>2</sub> or equivalent methods. **(10/12)**

Fuel sampling using the methods and procedures of 40 CFR §60.335(b)(10) or §60.4415(a) may be conducted in lieu of stack sampling for SO<sub>2</sub>. If fuel sampling is used, compliance with NSPS Subpart GG or KKKK SO<sub>2</sub> limits shall be based on 100 percent conversion of the sulfur in the fuel to SO<sub>2</sub>. Any deviations from those procedures must be approved by the Executive Director of the TCEQ prior to sampling. The TCEQ Executive Director or designated representative shall be afforded the opportunity to observe all such sampling.

The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at the holder's expense.

A. The TCEQ Houston Regional Office shall be contacted as soon as testing is scheduled but not less than 30 days prior to sampling to schedule a pretest meeting. The notice shall include:

- (1) Date for pretest meeting.
- (2) Date sampling will occur.
- (3) Name of firm conducting sampling.
- (4) Type of sampling equipment to be used.
- (5) Method or procedure to be used in sampling.
- (6) Procedure used to determine turbine loads during and after the sampling period.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports. A written proposed description of any deviation from sampling procedures specified in permit conditions or the TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director shall approve any deviation from specified sampling procedures. Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Air Permits Division. Test waivers and alternate/equivalent procedure proposals for NSPS testing which must have the EPA approval shall be submitted to the TCEQ Air Permits Division in Austin.

B. Each turbine shall be tested with duct burners at maximum firing rate while the turbine is operating as close to base load as possible. The permit holder shall present at the pretest meeting the manner in which stack sampling will be executed in order to demonstrate compliance with emission standards found in NSPS, Subparts Da, GG, or KKKK as applicable. **(10/12)**

- C. Air contaminants and diluents to be sampled and analyzed at a minimum of four points in the turbine's permitted operating range include (but are not limited to) NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, NH<sub>3</sub>, opacity, and O<sub>2</sub>. [As noted above, fuel sampling using the methods and procedures of 40 CFR §60.335(b)(10) or §60.4415(a) may be conducted in lieu of stack sampling for SO<sub>2</sub> under the assumption that all sulfur will be oxidized during combustion.]. For EPN GTG/HRSG3, the sampling above only must be done at one load within 25% of base (100% of peak) load for the given ambient conditions.
- The PM<sub>10</sub> shall be tested at one point in the turbine permitted operating range while the turbine is operating as close to base load as possible and while the duct burners are operating at their maximum firing rate. For EPN GTG/HRSG3, the sampling above only must be done at one load within 25% of base load for the given ambient conditions.
- D. The auxiliary boilers shall be tested at their maximum firing rate for the air contaminants (except NH<sub>3</sub>) and diluents identified in Special Condition No. 15C. (As noted in Special Condition No. 15C above, fuel sampling may be conducted in lieu of stack sampling for SO<sub>2</sub>). A representative of the permit holder shall be present during the pretest meeting and during the initial compliance test with regard to emission standards found in NSPS, Subpart Db. Emission concentrations from the boilers shall be corrected to 3 % O<sub>2</sub>.
- E. Sampling as required by this condition shall occur within 60 days after achieving the maximum fuel-firing rate at which the turbines and duct burners will be operated but no later than 180 days after initial start-up of each cogeneration unit. Additional sampling shall occur as may be required by the TCEQ or EPA.
- F. Within 60 days after the completion of the testing and sampling required herein, two copies of the sampling reports prepared shall be distributed as follows:
- (1) One copy to the EPA Region 6 Office, Dallas.
  - (2) One copy to the TCEQ Houston Regional Office.
- G. The initial compliance testing was completed on all units except for EPN GTG/HRSG3 in April, 2002. **(10/12)**

### **Continuous Determination of Compliance**

16. The holder of this permit shall install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of NO<sub>x</sub>, CO, and diluent gases (O<sub>2</sub> or carbon dioxide [CO<sub>2</sub>]), from each Exhaust Stack (EPNs: GTG/HRSG1, GTG/HRSG2, GTG/HRSG3, AUXBOIL1, AUXBOIL2, and AUXBOIL3). **(10/12)**
- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or 40 CFR Part 75, Appendix A, or an acceptable alternative. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B or 40 CFR Part 75, Appendix A, contact the TCEQ Office of Air, Air

Permits Division in Austin for requirements to be met. The CEMS shall comply with the following requirements:

Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, § 5.2.3 and any CEMS downtime and all cylinder gas audit exceedances of  $\pm 15$  percent accuracy or 5 ppm, whichever is greater, shall be recorded and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director. **(10/12)**

- B. The monitoring data shall be reduced to hourly average values at least once every day, using a minimum of four equally-spaced data points from each one-hour period. At least two valid data points shall be generated during the hourly period in which zero and span is performed.
  - C. All monitoring data and quality-assurance data shall be maintained by the source for a period of five years and shall be made available to the TCEQ Executive Director or designated representative upon request. The hourly average data from the CEMS may be used to determine compliance with the conditions of this permit. Hourly average concentrations from EPNs: GTG/HRSG1, GTG/HRSG2, GTG/HRSG3, AUXBOIL1, AUXBOIL2, and AUXBOIL3 shall be summed to tpy and used to determine compliance with the emission limits of this permit.
  - D. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required relative accuracy test audit in order to provide them the opportunity to observe the testing.
  - E. If applicable, the CEMS for the turbines/duct burner stacks may be required to meet the design and performance specifications, pass the field tests, and meet the installation requirements and data analysis and reporting requirements specified in the applicable performance specifications in 40 CFR Part 75, Appendix A. The requirements of 40 CFR Part 75, Appendix A and B, respectively, are deemed acceptable alternatives to the performance specifications and quality assurance requirements of 40 CFR Part 60 for the NO<sub>x</sub> and O<sub>2</sub> CEMS.
- 17. If any emission monitor fails to meet specified performance, it shall be repaired or replaced as soon as reasonably possible.
  - 18. The holder of this permit shall additionally install, calibrate, maintain, and operate continuous monitoring systems to monitor and record the average hourly natural gas and refinery fuel gas consumption of the gas turbines, the duct burners, and auxiliary boilers. The systems shall be accurate to  $\pm 5.0$  percent of the unit's maximum flow.
  - 19. The holder of this permit shall either measure or develop a program to calculate the total mass flow rate through each HRSG stack and each auxiliary boiler stack to ensure continuous compliance with the emission limitations specified in the MAERT. The permit holder shall calculate hourly mass emissions in lbs/hr using the measured or calculated exhaust flow rate and the measured concentrations of NO<sub>x</sub> and CO from the CEMS required in Special Condition No. 16. The hourly calculated values will be cumulatively added during each hour of the month and stored on a computer hard drive and on

computer disk or other TCEQ accepted computer media. Records of this information shall also be available in a form suitable for inspection.

20. The holder of this permit shall assure compliance with the fuel sulfur limitation in Special Condition No. 1 by receipt of a fuel supplier certification demonstrating the maximum sulfur content of the supplied natural gas fuel. In addition, the holder of this permit shall maintain certified records of analysis of supplied refinery fuel gas demonstrating the maximum sulfur content of the supplied refinery fuel gas.

As an alternative, compliance assurance with the fuel sulfur limitation in Special Condition No. 1 may be determined by conducting one of the testing options, including records maintenance, as outlined in 40 CFR Part 75, Appendix D.

21. The NH<sub>3</sub> concentration in each Exhaust Stack (EPNs: GTG/HRSG1, GTG/HRSG2, GTG/HRSG3, AUXBOIL1, AUXBOIL2, and AUXBOIL3) shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to frequency listed below. **(10/12)**
  - A. The holder of this permit may install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of NH<sub>3</sub>. The NH<sub>3</sub> concentrations shall be corrected to meet the restrictions in accordance with Special Condition No. 9.
  - B. As an approved alternative, the NH<sub>3</sub> slip may be measured using a sorbent or stain tube device specific for NH<sub>3</sub> measurement in the 5 to 10 ppm range. The frequency of sorbent/stain tube testing shall be daily for the first 60 days of operation, after which, the frequency may be reduced to weekly testing if operating procedures have been developed to prevent excess amounts of NH<sub>3</sub> from being introduced in the SCR unit and when operation of the SCR unit has been proven successful with regard to controlling NH<sub>3</sub> slip. Daily sorbent or stain tube testing shall resume when the catalyst is within 30 days of its useful life expectancy. If the measured or calculated ammonia slip concentration exceeds 8 ppm at any time, the permit holder shall begin NH<sub>3</sub> testing by either the Phenol Nitroprusside Method, the Indophenol Method, or the EPA Conditional Test Method 27 on a quarterly basis. The quarterly testing shall continue until such time as the SCR unit catalyst is replaced or the quarterly testing indicates NH<sub>3</sub> slip is 5 ppm or less. These results shall be recorded and used to determine compliance with Special Condition No. 9. This condition does not apply if either of the continuous monitoring methods of 21(A) or 21(C) is used to determine compliance with Special Condition No. 9. **(12/11)**
  - C. As an approved alternative to sorbent or stain tube testing or an NH<sub>3</sub> CEMS, the permit holder may install and operate a second NO<sub>x</sub> CEMS probe located between the duct burners and the SCR, upstream of the stack NO<sub>x</sub> CEMS, which may be used in association with the SCR efficiency and NH<sub>3</sub> injection rate to estimate NH<sub>3</sub> slip. This condition shall not be construed to set a minimum NO<sub>x</sub> reduction efficiency on the SCR unit. These results shall be recorded and used to determine compliance with Special Condition No. 9.

- D. Any other method used for measuring  $\text{NH}_3$  slip shall require prior approval from the TCEQ Regional Office.
22. To demonstrate continuous compliance with the TDS concentration in Special Condition No. 8 and with the hourly and annual particulate emission rate in the MAERT, the holder of this permit shall have the option to either measure conductivity (in order to convert to TDS) or conduct a direct TDS analysis:
- A. Option A: Direct TDS Analysis
    - (1) Analysis shall be performed in accordance with “Standard Methods for the Examination of Water and Wastewater” Method 2540.
    - (2) Continuous compliance with the hourly and annual particulate matter emission rates for the Cooling Tower in the MAERT shall be demonstrated by monitoring the TDS of the cooling water at a monitoring point in the recirculating water of the cooling water of the cooling tower, and recording the TDS every two weeks.
    - (3) If a TDS exceedance occurs, an evaluation shall be conducted within 24 hours of the receipt of the analysis report and corrective action to eliminate the exceedance shall be taken promptly and documented within one week of the occurrence.
  - B. Option B: Conductivity Measurement
    - (1) Perform sampling to establish the conductivity to TDS conversion factor that shall be used by the permit holder to demonstrate compliance with the TDS concentration. A conservative default conversion factor of 0.80 (conductivity to TDS) may be used initially until a site specific demonstrated value is determined.

Cooling water samples (minimum of three samples) shall be collected and a TDS/Conductivity analysis performed on each of the samples in order to establish the actual cooling water conductivity to TDS conversion factor. The conductivity and TDS analysis shall be performed in accordance with “Standard Methods for the Examination of Water and Wastewater” Method 2510 (Conductivity) and Methods 2540 (Solids). An average conversion factor and standard deviation based on the values shall be determined from the cooling water sample results.
    - (2) Within 30 days after completion of the sampling, a copy of the sampling report shall be submitted to the TCEQ Houston Regional Office.
    - (3) Continuous compliance with the hourly and annual particulate matter emission rates for the Cooling Tower in the MAERT shall be demonstrated by monitoring the conductivity of the cooling water at a monitoring point in the recirculating water of the cooling tower and recording the conductivity reading on no less than a weekly basis. Each conductivity measurement shall be converted to TDS concentration in ppmvd hourly and annual particulate matter emission rates for the Cooling Towers in the MAERT shall be demonstrated by

the holder of this permit by monitoring the conductivity of the cooling water at a monitoring point in the recirculating water of each cooling tower, and recording these conductivity readings on a no less than weekly basis. Each conductivity measurement shall be converted to TDS concentration in ppmw using the conductivity factor established in accordance with Special Condition No. 22B(1). The permit holder shall utilize one of the following monitoring options:

- (a) A Process Conductivity Meter (PCM).
  - i. The PCM shall be quality assured quarterly, to confirm the conversion factor, TDS ppmw, and the correlation between the two, by performing a conductivity and TDS analysis. The conductivity and TDS analysis shall be performed in accordance with “Standard Methods for the Examination of Water and Wastewater” Method 2510 (Conductivity) and Methods 2540 (Solids).
  - ii. The PCM shall be calibrated once a quarter in accordance with the manufacturer specifications.
  - iii. In the event the PCM is offline due to repair or maintenance, either the use of a portable conductivity meter or a TDS analysis in accordance with Method 2540 (solids) may be used to satisfy the weekly periodic monitoring requirements.
- or
- (b) A portable conductivity meter.
  - i. The portable conductivity meter shall be quality assured quarterly, to confirm the conversion factor, TDS ppmw, and the correlation between the two, by performing a conductivity and TDS analysis. The conductivity and TDS analysis shall be performed in accordance with “Standard Methods for the Examination of Water and Wastewater” Method 2510 (Conductivity) and Methods 2540 (Solids).
  - ii. The portable conductivity meter shall be calibrated once a quarter in accordance with the manufacturer specifications.
  - iii. In the event the portable conductivity meter is unavailable due to repair or maintenance, a TDS analysis in accordance with Method 2540 (solids) may be used to satisfy the weekly periodic monitoring requirements.
- (c) Records shall include the date and time of the monitoring, the location of the monitoring point for the cooling tower recirculation water, and the measured conductivity and equivalent TDS or the direct TDS analysis.

### **Maintenance, Startup, and Shutdown**

23. This permit authorizes the emissions from the planned MSS activities listed in Attachment A, Attachment B, and the MAERT attached to this permit. Attachment A identifies the inherently low emitting (ILE) planned maintenance activities that this permit authorizes to be performed. Attachment B identifies the non-ILE planned maintenance activities that this permit authorizes to be performed. **(12/11)**
24. The emission limits that are identified in Special Condition Nos. 2 and 9 do not apply during periods of planned MSS activities. **(12/11)**
25. The holder of this permit shall minimize emissions during planned MSS activities by operating the facility and associated air pollution control equipment in accordance with good air pollution control practices, safe operating practices, and protection of the facility. **(12/11)**
26. Emissions during planned MSS activities will be minimized by limiting the duration of operation in planned startup and shutdown mode as follows: **(12/11)**
  - A. Turbines/HRSG
    - (1) Planned startup of the electric generating facilities (EGFs) is defined as the period that begins when measurable fuel flow is recorded in the plant's Data Acquisition and Handling System (DAHS) and ends when either the combustion turbine output exceeds 95 MW and the steam injection system has come online for EPNs GTG/HRSG<sub>1</sub> and GTG/HRSG<sub>2</sub> or the turbine output reaches 60% of base load for EPN GTG/HRSG<sub>3</sub>. Startup for GTG/HRSG<sub>3</sub> is limited to 450 hours per calendar year. **(4/16)**

A planned cold startup (a startup after the steam turbine associated with the gas turbine has been down for a period of 24 hours or more) is limited to 480 minutes per event. A planned warm startup (a startup that is not a cold startup) is limited to 180 minutes per event. **(10/12)**
    - (2) A planned shutdown of the EGFs is defined as the period that begins when either the gas turbine output drops below 95 MW for EPNs GTG/HRSG<sub>1</sub> and GTG/HRSG<sub>2</sub> or the turbine output drops below 55% of base load for EPN GTG/HRSG<sub>3</sub> and ends when the DAHS no longer records measureable fuel flow to the turbine. A planned shutdown for each EGF is limited to 180 minutes per event. **(10/12)**
    - (3) Emissions from combustion turbine optimization activities, as defined in Attachment B, shall be subject to the hourly emission limits for MSS activities from gas turbines listed on the MAERT. The emissions from such activities shall not exceed the hourly emission limits for non-MSS activities for more than eight hours per calendar day.
    - (4) Emission from combustion turbine diagnostic load reduction activities, as identified in Attachment B, shall be subject to the hourly MSS emission rates



listed on the MAERT and shall not exceed 54 hours per calendar year for all gas turbines combined. **(4/16)**

B. Boilers

- (1) A planned startup of the auxiliary boilers with EPNs: AUXBOIL1, AUXBOIL2, and AUXBOIL3 is defined as the period that begins when the DAHS detects measurable fuel flow to the boiler and ends when the boiler reaches hot standby or the fuel flow at which the boiler will operate. All planned startups for each auxiliary boiler shall be limited to 120 minutes per event.
  - (2) A planned shutdown of the auxiliary boilers with EPNs :AUXBOIL1, AUXBOIL2, and AUXBOIL3 is defined as the period that begins when the boiler drops below the hot standby fuel flow level and ends when no fuel flow is detected. A planned shutdown for each auxiliary boiler shall be limited to 60 minutes per event.
  - (3) Emissions from the boiler optimization activities, as defined in Attachment B, shall be subject to the hourly emission limits for MSS activities from auxiliary boilers listed on the MAERT. The emissions from such activities shall not exceed the hourly emission limits for non-MSS activities for more than eight hours per calendar day. **(6/12)**
27. Compliance with the emissions limits for planned MSS activities identified in the MAERT attached to this permit shall be demonstrated as follows: **(12/11)**
  - A. The permit holder shall annually confirm the continued validity of the estimated potential to emit represented in the permit application for all ILE planned maintenance activities. The total emissions from all ILE planned maintenance activities (see Attachment A) shall be considered to be no more than the estimated potential to emit for those activities that are represented in the permit application.
  - B. For each pollutant emitted during non-ILE planned maintenance activities (see Attachment B) whose emissions are measured using a CEMS, as per Special Condition No. 28(A), the permit holder shall compare the pollutant's short-term (hourly) emissions during planned maintenance activities as measured by the CEMS to the applicable short-term planned MSS emissions limit in the MAERT for each calendar month.
  - C. For each pollutant emitted during non-ILE planned maintenance activities (see Attachment B) whose emissions occur through a stack but are not measured using CEMS as per Special Condition No. 28(A), the permit holder shall determine the total emissions of the pollutant through the stack that result from such non-ILE planned maintenance activities in accordance with Special Condition No. 28(B) for each calendar quarter.
28. The permit holder shall determine the emissions during planned MSS activities for use in Special Condition No. 27 as follows: **(12/11)**

- A. For each pollutant whose emissions during normal facility operations are measured with a CEMS that has been certified to measure the pollutant's emissions over the entire range of a planned MSS activity, the permit holder shall measure the emissions of the pollutant during the planned MSS activity using the CEMS.
  - B. For each pollutant not described in Special Condition No. 28(A), the permit holder shall calculate the pollutant's emissions during all occurrences of each type of planned MSS activity for each calendar month using the frequency of the planned MSS activity identified in work orders or equivalent records and the emissions of the pollutant during the planned MSS activity as represented in the planned MSS permit application. In lieu of using the emissions of the pollutant during the planned MSS activity as represented in the planned MSS permit application to calculate such emissions, the permit holder may determine the emissions of the pollutant during the planned MSS activity using an appropriate method, including but not limited to, any of the methods described in paragraphs 1 through 3 below, provided that the permit holder maintains appropriate records supporting such determination.
    - (1) Use of emission factor(s), facility specific parameter(s), and/or engineering knowledge of the facility's operations;
    - (2) Use of emissions data measured (by a CEMS or during emissions testing) during the same type of planned MSS activity occurring at or on a similar facility, and correlation of that data with the facility's relevant operating parameters, including, but not limited to, electric load, temperature, fuel input, and fuel sulfur content; or
    - (3) Use of emissions testing data collected during a planned MSS activity occurring at or on the facility, and correlation of that data with the facility's relevant operating parameters, including, but not limited to, electric load, temperature, fuel input, and fuel sulfur content.
29. With the exception of the emission limits in the MAERT attached to this permit, the permit conditions relating to planned MSS activities do not become effective until 180 days after issuance of the permit amendment that added such conditions. **(12/11)**
30. The CO and NH<sub>3</sub> mass emissions limits in the MAERT attached to this permit that apply during planned MSS activities constitute alternative case specific specifications for the CO and NH<sub>3</sub> concentration limits in Title 30 Texas Administrative Code (30 TAC) Chapter 117.310(c) during planned MSS activities. **(10/12)**

### **Recordkeeping Requirements**

31. The following records shall be kept at the plant for the life of the permit. All records required in this permit shall be made available at the request of personnel from the TCEQ, EPA, or any air pollution control agency with jurisdiction.
- A. A copy of this permit.

- B. Permit applications dated August 1999 and subsequent representations submitted to the TCEQ.
  - C. A complete copy of the testing reports and records of the initial performance testing completed pursuant to Special Condition No. 15 to demonstrate initial compliance.
  - D. Stack sampling results or other air emissions testing (other than CEMS data) that may be conducted on units authorized under this permit after the date of issuance of this permit.
32. The following information shall be maintained by the holder of this permit in a form suitable for inspection for a period of five years after collection and shall be made immediately available upon request to representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction: **(12/11)**
- A. The NO<sub>x</sub>, CO, and diluent gases, O<sub>2</sub> or CO<sub>2</sub>, CEMS emissions data to demonstrate compliance with the emission rates listed in the MAERT and the concentration limits in Special Conditions No. 5 and 6;
  - B. Raw data files of all CEMS data including calibration checks and adjustments and maintenance performed on these systems;
  - C. Records of the hours of operation and average daily quantity of natural gas and refinery gas fired in the turbines, HRSG duct burners, and auxiliary boilers;
  - D. Records of fuel sampling conducted pursuant to 40 CFR Part 60, Subpart GG;
  - E. Records of NH<sub>3</sub> emissions sampling and calculations pursuant to Special Condition No. 21 to show compliance with Special Condition No. 9;
  - F. Written records of any accidental releases, spills, or venting of NH<sub>3</sub> and the corrective action taken in accordance with Special Condition No. 11;
  - G. Written records of maintenance performed to any piping and valves in NH<sub>3</sub> service pursuant to Special Condition No. 11;
  - H. Records of cooling tower water conductivity and total dissolved solids monitoring;
  - I. Records of opacity observations, in compliance with Special Condition No. 7;
  - J. Records to demonstrate compliance with Special Condition No. 26; and
  - K. Records of emission calculations and/or emissions data specified in Special Condition No. 27(B), if applicable.

### **General Requirements**

- 33. This permit covers only those sources of emissions listed in the MAERT and those sources are subject to the emission limits and conditions specified in the attached table. **(12/11)**
- 34. The following facilities are authorized by permits by rule under Title 30 Texas Administrative Code Chapter 106. **(12/11)**

<b>Facilities</b>	<b>Authorization</b>
Water and Wastewater Treatment	§ 106.532
Brazing, Soldering, and Welding Equipment	§ 106.227
Outdoor Abrasive Blasting	§ 106.452
Solvent Cleaning, Parts Degreaser	§ 106.454
Portable Small Engines > 12 months	§ 106.511
Emergency Engines	§ 106.511
Emergency Engines	§ 106.263
Routine Maintenance, Startup and Shutdown of Facilities, and Temporary Maintenance Facilities	§ 106.263
Storage Tank Maintenance	§ 106.477
Organic and Inorganic Liquid Loading and Unloading	§ 106.472

35. Modification of the Siemens FD2 combustion turbine to the FD3 series shall commence within 18 months of the beginning of commercial operation of GTG/HRSG3. **(10/12)**
36. The holder of this permit upon completion of the upgrade authorized in Special Condition No. 35 shall submit an authorization within 180 days to remove the FD2 mass emission rates from the MAERT. **(10/12)**

Date: April 13, 2016

## Attachment A

Permit Nos. 42179, PSDTX955M1, and N021M1

<b>Inherently Low Emitting Planned Maintenance Activities</b>						
Planned Maintenance Activity	Emissions					
	NO <sub>x</sub>	CO	VOC	PM	NH <sub>3</sub>	Opacity
Gaseous fuel venting <sup>1</sup>			X			
Turbine Washing, Unit On-Line <sup>2</sup>				X		
Air Intake Filter Maintenance				X		X
Annual Catalyst Handling and Maintenance <sup>3</sup>				X		
Boiler Tube Cleaning			X			
CEMS Calibration	X	X				
Analytical Equipment and Process Instruments			X			
Small Equipment Maintenance - Natural Gas <sup>4</sup>			X			
Small Equipment Maintenance - High Vapor Pressure VOC <sup>4</sup>			X			
Small Equipment Maintenance - Low Vapor Pressure VOC <sup>4</sup>			X			
Small Equipment Maintenance - NH <sub>3</sub> <sup>4</sup>					X	

Date: December 16, 2011

---

<sup>1</sup> Includes, but is not limited to venting prior to pipeline pigging and meter proving.

<sup>2</sup> Involves the use of water only.

<sup>3</sup> Includes, but is not limited to replacement/cleaning/activation/deactivation of the selective catalytic reduction system.

<sup>4</sup> Includes, but is not limited to the following: (i) repair/replacement of pumps, compressors, valves, pipes, flanges, transport lines, filters and screens in natural gas/fuel oil/diesel oil/ammonia/lube oil/gasoline service, (ii) vehicle/mobile equipment maintenance which may involve small emissions of volatile organic compounds such as oil changes, transmission service, and hydraulic system service.

## Attachment B

Permit Nos. 42179, PSDTX955M1, and N021M1

Non-Inherently Low Emitting Planned Maintenance Activities						
Planned Maintenance Activity	EPN	Emissions				
		NO <sub>x</sub>	CO	VOC	PM	NH <sub>3</sub>
Combustion Turbine Optimization <sup>5,6</sup>	GTC/HRSG1 GTC/HRSG2 GTC/HRSG3	X	X	X	X	X
SCR Maintenance, Unit On-Line	GTC/HRSG1 GTC/HRSG2 GTC/HRSG3 AUXBOIL1 AUXBOIL2 AUXBOIL3	X				X
Auxiliary Boiler Optimization	AUXBOIL1 AUXBOIL2 AUXBOIL3	X	X	X	X	X
Diagnostic Load Reduction Activities <sup>6,7</sup>	GTC/HRSG1 GTC/HRSG2 GTC/HRSG3	X	X	X	X	X

Date: April 13, 2016

---

<sup>5</sup> Includes, but is not limited to the following: (i) leak/operability checks (*e.g. turbine over-speed test, trouble shooting*), (ii) balancing, (iii) tuning activities that occur during seasonal tuning or after the completion of initial construction, a combustor change-out, a major repair, maintenance to a combustor, or other similar circumstances.

<sup>6</sup> Hourly emissions from these activities will be subject to the hourly emission limit for MSS activities from the gas turbines listed on the MAERT.

<sup>7</sup> Includes, but is not limited to combustion turbine load reductions (runbacks) associated with: initiation of steam turbine operation, low load steam turbine operation, variability in water or fuel supply, electric generator protection, and variation in turbine operations (which includes but is not limited to, combustor flashback, primary combustion zone re-ignition, or combustion exhaust blade path spread).

# Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 42179, PSDTX955M1, N021M1

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

## Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hr (6)	TPY (4)
Hourly Emission Rates - Turbines and Duct Burners				
GTG/HRSG1	Turbine/HRSG No. 1 Siemens 501F (180 MW) + 475 MMBtu/hr DB	NO <sub>x</sub> (5)	32.1	-
		NO <sub>x</sub> (MSS)	350.0	-
		CO	346.0	-
		CO (MSS)	3200.0	-
		VOC	26.9	-
		VOC (MSS)	183.5	-
		PM <sub>10</sub>	29.4	-
		SO <sub>2</sub>	31.4	-
		NH <sub>3</sub>	28.0	-
		NH <sub>3</sub> (MSS)	50.0	-
		H <sub>2</sub> SO <sub>4</sub>	4.8	-
GTG/HRSG2	Turbine/HRSG No. 2 Siemens 501F (180MW) + 475 MMBtu/hr DB	NO <sub>x</sub> (5)	32.1	-
		NO <sub>x</sub> (MSS)	350.0	-
		CO	346.0	-
		CO (MSS)	3200.0	-
		VOC	26.9	-
		VOC (MSS)	183.5	-
		PM <sub>10</sub>	29.4	-
		SO <sub>2</sub>	31.4	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hr (6)	TPY (4)
GTG/HRSG2	Turbine/HRSG No. 2 Westinghouse 501F + 475 MMBtu/hr DB	NH <sub>3</sub>	28.0	-
		NH <sub>3</sub> (MSS)	50.0	-
		H <sub>2</sub> SO <sub>4</sub>	4.8	-
Hourly Emission Rates - Auxiliary Boilers				
AUXBOIL 1	Auxiliary Steam Boiler No. 1 430 MMBtu/hr	NO <sub>x</sub> (5)	22.8	-
		CO	26.2	-
		CO (MSS)	31.4	-
		VOC	7.6	-
		VOC (MSS)	9.1	-
		PM <sub>10</sub>	7.6	-
		SO <sub>2</sub>	6.2	-
		NH <sub>3</sub>	1.4	-
		H <sub>2</sub> SO <sub>4</sub>	1.0	-
AUXBOIL 2	Auxiliary Steam Boiler No. 2 430 MMBtu/hr	NO <sub>x</sub> (5)	22.8	-
		CO	26.2	-
		CO (MSS)	31.4	-
		VOC	7.6	-
		VOC (MSS)	9.1	-
		PM <sub>10</sub>	7.6	-
		SO <sub>2</sub>	6.2	-
		NH <sub>3</sub>	1.4	-
		H <sub>2</sub> SO <sub>4</sub>	1.0	-



Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hr (6)	TPY (4)
AUXBOIL 3	Auxiliary Steam Boiler No. 3 430 MMBtu/hr	NO <sub>x</sub> (5)	22.8	-
		CO	26.2	-
		CO (MSS)	31.4	-
		VOC	7.6	-
		VOC (MSS)	9.1	-
		PM <sub>10</sub>	7.6	-
		SO <sub>2</sub>	6.2	-
		NH <sub>3</sub>	1.4	-
		H <sub>2</sub> SO <sub>4</sub>	1.0	-
Combined Annual Emission Rates - Turbines, Duct Burners, and Auxiliary Boilers				
GTG/HRSG 1, GTG/HRSG 2, AUXBOIL1, AUXBOIL2, & AUXBOIL3	Turbine/HRSG 1 - 2 and Auxiliary Boilers 1-3	NO <sub>x</sub>	-	268.0
		CO	-	937.0
		VOC	-	102.0
		PM <sub>10</sub>	-	180.0
		SO <sub>2</sub>	-	22.5
		NH <sub>3</sub>	-	237.8
		H <sub>2</sub> SO <sub>4</sub>	-	3.4
GTG/HRSG3	Turbine/HRSG No. 3 Siemens 501F (180 MW) + 475 MMBtu/hr DB  FD2 Option	NO <sub>x</sub>	18.0	61.5
		NO <sub>x</sub> (MSS)	350.0	-
		CO	236.0	231
		CO (MSS)	3200.0	-
		VOC	19.3	22.1
		VOC (MSS)	183.5	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hr (6)	TPY (4)
		PM	27.0	72.4
		PM <sub>10</sub>	27.0	72.4
		PM <sub>2.5</sub>	27.0	72.4
		SO <sub>2</sub>	33.6	
		NH <sub>3</sub>	23.3	61.9
		NH <sub>3</sub> (MSS)	50.0	-
		H <sub>2</sub> SO <sub>4</sub>	5.14	0.92
GTG/HRSG3	Turbine/HRSG No. 3 Siemens 501F (180 MW) + 475 MMBtu/hr DB  FD3 Option	NO <sub>x</sub>	18.0	62.7
		NO <sub>x</sub> (MSS)	350.0	-
		CO	246.9	232.1
		CO (MSS)	3200.0	-
		VOC	19.6	22.3
		VOC (MSS)	183.5	-
		PM	28.4	72.5
		PM <sub>10</sub>	28.4	72.5
		PM <sub>2.5</sub>	28.4	72.5
		SO <sub>2</sub>	33.6	5.9
		NH <sub>3</sub>	23.3	63.4
		NH <sub>3</sub> (MSS)	50.0	-
		H <sub>2</sub> SO <sub>4</sub>	5.14	0.94
Additional Sources				
COOLTWR1	Cooling Tower 1 (7)	PM <sub>10</sub>	1.33	3.50
LUBEOILFUG	Lubricating Oil Systems Fugitives (7, 8)	VOC	0.11	0.47

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hr (6)	TPY (4)
FUELGASFUG	Fuel Gas System (7, 8)	VOC	0.50	2.18
NH <sub>3</sub> FUG	Ammonia Fugitives (7, 8)	NH <sub>3</sub>	0.25	1.08
OILDEMIST	Oil Mist Eliminator (All turbines) (7)	VOC	0.03	0.11
TK-004	Americor 1,000-Gallon Storage Tank (7)	VOC	<0.01	<0.01
TK-004AX	Americor 1,000-Gallon Storage Tank (7)	VOC	<0.01	<0.01
MSSFUG	MSS-Related Fugitives (8)	NO <sub>x</sub>	<0.01	<0.01
		CO	<0.01	<0.01
		VOC	4.25	0.03
		PM <sub>10</sub>	0.22	0.03
		PM <sub>2.5</sub>	0.22	0.03
		NH <sub>3</sub>	2.66	<0.01

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1  
NO<sub>x</sub> - total oxides of nitrogen  
SO<sub>2</sub> - sulfur dioxide  
PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented  
PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter  
CO - carbon monoxide  
NH<sub>3</sub> - ammonia  
H<sub>2</sub>SO<sub>4</sub> - sulfuric acid  
MSS - maintenance, startup, and shutdown
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
- (5) The maximum pound per hour (lb/hr) NO<sub>x</sub> emission rate is based on a rolling three-hour average.
- (6) Planned MSS lb/hr emissions for all pollutants are authorized even if not specifically identified as MSS. During any clock hour that includes one or more minutes of planned MSS activities, that pollutant's maximum hourly emission rate shall apply during that clock hour.

Emission Sources - Maximum Allowable Emission Rates

- (7) The lb/hr and tpy emission limits specified in the table entitled "Emission Sources - Maximum Allowable Emission Rates" for this facility include emission from the facility during both normal operations and planned MSS activities.
- (8) Fugitive emissions are an estimate only and should not be considered as maximum allowable emission rates.

Date: April 13, 2016

**PREVENTION OF SIGNIFICANT DETERIORATION PERMIT  
FOR GREENHOUSE GAS EMISSIONS  
ISSUED PURSUANT TO THE REQUIREMENTS AT 40 CFR § 52.21**

**U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 6**

**PSD PERMIT NUMBER:** PSD-TX-955-GHG

**PERMITTEE:** Calpine Corporation  
717 Texas, Suite 1000  
Houston, TX 77002

**FACILITY NAME:** Calpine Corporation,  
Channel Energy Center (CEC) LLC

**FACILITY LOCATION:** 451 Light Company Road  
Pasadena, TX 77506

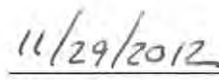
Pursuant to the provisions of the Clean Air Act (CAA), Subchapter I, Part C (42 U.S.C. Section 7470, *et. Seq.*), and the Code of Federal Regulations (CFR) Title 40, Section 52.21, and the Federal Implementation Plan at 40 CFR § 52.2305 (effective May 1, 2011 as published at 76 FR 25178), the U.S. Environmental Protection Agency, Region 6 (EPA) is issuing a *Prevention of Significant Deterioration* (PSD) permit to the Calpine Corporation, Channel Energy Center (CEC) LLC for Greenhouse Gas (GHG) emissions. The Permit applies to the two-phase construction of a new 180 megawatt (MW) natural gas-fired combined-cycle combustion turbine, identified as CTG3/HRSG3, to augment the existing power generation at the existing facility located in Pasadena, Texas.

Calpine Corporation is authorized to construct at the Channel Energy Center (CEC) as described herein, in accordance with the permit application (and plans submitted with the permit application), the federal PSD regulations at 40 CFR § 52.21, and other terms and conditions set forth in this PSD permit in conjunction with the corresponding Texas Commission on Environmental Quality (TCEQ) PSD permit No. PSD-TX-955. Failure to comply with any condition or term set forth in this PSD Permit may result in enforcement action pursuant to Section 113 of the Clean Air Act (CAA). This PSD Permit does not relieve Calpine Corporation of the responsibility to comply with any other applicable provisions of the CAA (including applicable implementing regulations in 40 CFR Parts 51, 52, 60, 61, 72 through 75, and 98) or other federal and state requirements (including the state PSD program that remains under approval at 40 CFR § 52.2303).

In accordance with 40 CFR §124.15(b)(3), this PSD Permit becomes effective immediately upon issuance of this final decision.



Carl E. Edlund, P.E., Director  
Multimedia Planning and Permitting Division



Date

**Calpine Corporation, Channel Energy Center (CEC) LLC (PSD-TX-955-GHG)**  
**Prevention of Significant Deterioration Permit**  
**For Greenhouse Gas Emissions**  
**Final Permit Conditions**

**PROJECT DESCRIPTION**

The proposed facility is a natural gas-fired combined-cycle electric generating unit at the Channel Energy Center (CEC) LLC power plant in Harris County, Texas. With this construction permit, the Permittee will construct a new natural gas-fired combined-cycle combustion turbine generator (CTG) unit, identified as CTG3/HRSG3, with a generating capacity of approximately 180 MW which is of the similar design and output as the other existing two (2) natural gas-fired combined-cycle combustion turbine units at the plant. Construction will be completed in two phases: in phase one, a new 168 MW Siemens FD2-series turbine will be constructed; in the second phase, the FD2 turbine which will be modified and upgraded to the 180 MW FD3-series within the prescribed time lines as defined by this permit. The steam produced from the new combustion turbine will exhaust to a dedicated Heat Recovery Steam Generator (HRSG) to produce steam. The steam produced from the HRSG is routed to either the existing steam turbine unit to produce electricity for sale to the Electric Reliability Council of Texas (ERCOT) power grid or may be sold for use at an adjacent industrial facility.

**EQUIPMENT LIST**

The following devices are subject to this GHG PSD permit.

<b>Emission Unit Id. No.</b>	<b>Description</b>
CTG3/HRSG3 (FD2-Series) (Initial Phase)	Natural Gas-Fired Siemen FD2-Series 501F Combustion Turbine Generator (CTG3) rated at a maximum base-load electric output of approximately 168 MW and venting to a dedicated Heat Recovery Steam Generator (HRSG3) that is equipped with a Selective Catalytic Reduction (SCR).
CTG3/HRSG3 (FD3-Series) (Final Phase)	Natural Gas-Fired Siemen FD3-Series 501F Combustion Turbine Generator (CTG3) rated at a maximum base-load electric output of approximately 180 MW and venting to a dedicated Heat Recovery Steam Generator (HRSG3) that is equipped with a Selective Catalytic Reduction (SCR).
NG-FUG	Fugitive Natural Gas emissions from piping components (including valves and flanges)
SF6-FUG	SF <sub>6</sub> Insulated Electrical Equipment (i.e., circuit breakers) consisting of one new 72 lb SF <sub>6</sub> insulated generator circuit breaker,

**I. GENERAL PERMIT CONDITIONS**

**A. PERMIT EXPIRATION**

Pursuant to 40 CFR §52.21(r), this PSD Permit shall become invalid if construction:

1. is not commenced (as defined in 40 CFR §52.21(b)(9)) within eighteen (18) months after the approval takes effect; or
2. is discontinued for a period of eighteen (18) months or more; or
3. is not completed within a reasonable time; and,
4. EPA may extend the eighteen (18) month period upon a satisfactory showing that an extension is justified.

**B. PERMIT NOTIFICATION REQUIREMENTS**

Permittee shall notify EPA Region 6 in writing or by electronic mail of the:

1. date construction is commenced, postmarked within thirty (30) calendar days of such date;
2. actual date of initial startup, as defined in 40 CFR §60.2, postmarked within fifteen (15) calendar days of such date;
3. date upon which initial performance tests will commence, in accordance with the provisions of Section V, postmarked not less than thirty (30) calendar days prior to such date. Notification may be provided with the submittal of the performance test protocol required pursuant to Section V.E; and
4. date upon which initial certification tests of fuel flow meter and determination of the GCV (Gross Calorific Value) and associated data acquisition and handling system in accordance with 40 CFR 75, Appendix D. Additionally, the initial certification or recertification application shall be submitted for the fuel flow meter as required by 40 CFR 75, Appendix D.
5. date upon which certification tests of the CO<sub>2</sub> CEMS will commence, if Calpine chooses to install a CO<sub>2</sub> continuous emission monitoring system (CEMS), in accordance with 40 CFR § 75.61(a)(1)(i) and 40 CFR Part 60, Appendix B, Performance Specification 3. Additionally, the initial certification or recertification application shall be submitted for the

CO<sub>2</sub> CEMS as required by 40 CFR 75.63.

6. date upon which the FD3-series combustion turbine generator is in commercial operation or date eighteen (18) months after the completion of initial performance testing, whichever comes first.

### **C. FACILITY OPERATION**

At all times, including periods of startup, shutdown, and malfunction, Permittee shall, to the extent practicable, maintain and operate the facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the EPA, which may include, but is not limited to, monitoring results, review of operating maintenance procedures and inspection of the facility.

### **D. MALFUNCTION REPORTING**

1. Permittee shall notify EPA by mail within forty-eight (48) hours following the discovery of any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in CO<sub>2</sub> emissions above the allowable emission limits stated in Section II of this permit.
2. Within ten (10) days of the restoration of normal operations after any failure described in Section I.D.1, the Permittee shall provide a written supplement to the initial notification that includes a description of the malfunctioning equipment or abnormal operation, the date of the initial malfunction, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed in Section II, and the methods utilized to mitigate emissions and restore normal operations.
3. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violation of this permit or any law or regulation such malfunction may cause.

### **E. RIGHT OF ENTRY**

EPA authorized representatives, upon the presentation of credentials, shall be permitted:

1. to enter the premises where the facility is located or where any records are required to be kept under the terms and conditions of this PSD Permit;



2. during normal business hours, to have access to and to copy any records required to be kept under the terms and conditions of this PSD Permit;
3. to inspect any equipment, operation, or method subject to requirements in this PSD Permit; and,
4. to sample materials and emissions from the source(s).

#### **F. TRANSFER OF OWNERSHIP**

In the event of any changes in control or ownership of the facilities to be constructed, this PSD Permit shall be binding on all subsequent owners and operators. Permittee shall notify the succeeding owner and operator of the existence of the PSD Permit and its conditions by letter; a copy of the letter shall be forwarded to EPA Region 6 within thirty (30) days of the letter signature.

#### **G. SEVERABILITY**

The provisions of this PSD Permit are severable, and, if any provision of the PSD Permit is held invalid by a court of competent jurisdiction, the remainder of this PSD Permit shall not be affected.

#### **H. ADHERENCE TO APPLICATION AND COMPLIANCE WITH OTHER ENVIRONMENTAL LAWS**

Permittee shall construct and operate this project in compliance with this PSD Permit, the application on which this permit is based, the TCEQ PSD Permit No. PSD-TX-955-GHG, as finalized and all other applicable federal, state, and local air quality regulations. This PSD permit does not release the Permittee from any liability for compliance with other applicable federal, state and local environmental laws and regulations, including the Clean Air Act.

#### **I. ACRONYMS AND ABBREVIATIONS**

AVO	Audio, Visual, and Olfactory
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CEC	Channel Energy Center
CEMS	Continuous Emissions Monitoring System
CFR	Code of Federal Regulations
CH <sub>4</sub>	Methane
CO	Carbon Monoxide

CO <sub>2</sub>	Carbon Dioxide
CO <sub>2</sub> e	Carbon Dioxide Equivalent
DCS	Distributed Control System
dscf	Dry Standard Cubic Foot
EPN	Emission Point Number
ERCOT	Electric Reliability Council of Texas
FR	Federal Register
GHG	Greenhouse Gas
gr	Grains
GWP	Global Warming Potential
HHV	High Heating Value
hp	Horsepower
hr	Hour
HRSG	Heat Recovery Steam Generator
KWh	Kilowatt-hour
lb	Pound
MMBtu	Million British Thermal Units
MW	Megawatt
MWh	Megawatt-hour
N <sub>2</sub> O	Nitrous Oxides
NSPS	New Source Performance Standards
PSD	Prevention of Significant Deterioration
QA/QC	Quality Assurance and/or Quality Control
RATA	Relative Accuracy Test Audit
SCFH	Standard Cubic Feet Per Hour
SCR	Selective Catalytic Reduction
SF <sub>6</sub>	Sulfur Hexafluoride
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
tpy	Tons Per Year
USC	United States Code
VOC	Volatile Organic Compounds

## **II. SPECIAL PERMIT CONDITIONS**

### **A. Facility Emission Limits**

The proposed BACT limits are in terms of efficiency measured in units of Btu of fuel energy consumed in order to generate a kilowatt of electric energy (Btu/kWh). The BACT limits for the heat rate in terms of Btu/kWh (HHV) on an annual basis will be the same for the FD2 configuration as the FD3 configuration. The FD3 configuration provides greater electrical output at high ambient temperatures during base load periods. Therefore, for the FD3, the potential annual electric generation (MWh) and fuel usage, as well as corresponding GHG emissions, will be higher on an annual basis. Consequently, the BACT limits, monitoring and recordkeeping requirements listed in this permit are identical for both the FD2- and FD3-series combined-cycle combustion turbine generators. Any output-based emissions, in tons of CO<sub>2</sub> per megawatt hour (tons/MWh) on a 30-day rolling average and annual emissions, in tons of CO<sub>2</sub>e per year (TPY) on a 365-day rolling average basis shall not exceed the following:

(NEXT PAGE)

Table 1. Phase 1 Facility Emission Limits

Phase 1 of Construction							
Emission Unit	Description	GHG Mass Basis		BACT			
			GHG Potential Emissions (TPY) <sup>2,3</sup>		Output-based BACT CO <sub>2</sub> Limit <sup>1</sup>	Tons per year CO <sub>2</sub> e <sup>2,3</sup>	Annual BACT Limit (TPY CO <sub>2</sub> e <sup>2,3</sup> )
<b>CTG3 (FD2) / HRSG3</b>	CTG3/HRSG3 Annual Emissions	CO <sub>2</sub>	984,393	CO <sub>2</sub>	0.460 tons/MWh	984,393	<b>985,340</b>
		CH <sub>4</sub>	18.22	CH <sub>4</sub>		383	
		N <sub>2</sub> O	1.82	N <sub>2</sub> O	7,730 Btu/KWh	565	
<b>NG-FUG / Fuel Gas Piping</b>	Fugitive Natural Gas emissions from piping components & Fuel Gas Piping	CO <sub>2</sub>	0.29	CO <sub>2</sub>		0.29	<b>157</b>
		CH <sub>4</sub> <sup>4</sup>	7.44	CH <sub>4</sub> <sup>4</sup>		156.23	
<b>SF6-FUG</b>	SF <sub>6</sub> Insulated Electrical Equipment	SF <sub>6</sub>	0.00018	SF <sub>6</sub>		4.3	<b>4.3</b>

1. Compliance with the output-based emission limits (on a per hour basis) is based on a 30-day rolling average and excludes duct burner firing.
2. Compliance with the annual emission limits (tons per year) is based on a 365-day rolling average.
3. The tpy emission limits specified in this table are not to be exceeded for this facility and includes emissions only from the facility during normal operations and startup and shutdown activities.
4. Because the emissions from this unit are calculated to be 96% methane (CH<sub>4</sub>), the remaining pollutant emission (CO<sub>2</sub>) is not presented in the table.
5. Because the emissions from this unit are calculated to be over 99.9% carbon dioxide (CO<sub>2</sub>), the remaining pollutant emissions (CH<sub>4</sub> and N<sub>2</sub>O) are not presented in the table.

Table 2. Phase 2 Facility Emission Limits

Phase 2 of Construction							
Emission Unit	Description	GHG Mass Basis		BACT			
			GHG Potential Emissions (TPY) <sup>2,3</sup>		Output-based BACT CO <sub>2</sub> Limit <sup>1</sup>	Tons per year CO <sub>2</sub> e <sup>2,3</sup>	Annual BACT Limit (TPY CO <sub>2</sub> e <sup>2,3</sup> )
<b>CTG3 (FD3) / HRSG3</b>	CTG3/HRSG3 Annual Emissions	CO <sub>2</sub>	1,002,039.1	CO <sub>2</sub>	0.460 tons/MWh  7,730 Btu/KWh	1,002,391	<b>1,003,355</b>
		CH <sub>4</sub>	18.55	CH <sub>4</sub>		390	
		N <sub>2</sub> O	1.86	N <sub>2</sub> O		575	
<b>NG-FUG / Fuel Gas Piping</b>	Fugitive Natural Gas emissions from piping components & Fuel Gas Piping	CO <sub>2</sub>	0.29	CO <sub>2</sub>		0.29	<b>157</b>
		CH <sub>4</sub> <sup>4</sup>	7.44	CH <sub>4</sub> <sup>4</sup>		156.23	
<b>SF6-FUG</b>	SF <sub>6</sub> Insulated Electrical Equipment	SF <sub>6</sub>	0.00018	SF <sub>6</sub>		4.3	<b>4.3</b>

1. Compliance with the output-based emission limits (on a per hour basis) is based on a 30-day rolling average and excludes duct burner firing.
2. Compliance with the annual emission limits (tons per year) is based on a 365-day rolling average.
3. The tpy emission limits specified in this table are not to be exceeded for this facility and includes emissions only from the facility during normal operations and startup and shutdown activities.
4. Because the emissions from this unit are calculated to be 96% methane (CH<sub>4</sub>), the remaining pollutant emission (CO<sub>2</sub>) is not presented in the table.
5. Because the emissions from this unit are calculated to be over 99.9% carbon dioxide (CO<sub>2</sub>), the remaining pollutant emissions (CH<sub>4</sub> and N<sub>2</sub>O) are not presented in the table.

**B. Requirements for Combustion Turbine**

**1. Combustion Turbine Generator (CTG) BACT Emission Limits**

- a. Within 180 days of the date of initial startup of the FD2-series combustion turbine generator, the Permittee shall perform an initial emission test for CO<sub>2</sub> and use emission factors from 40 CFR Part 98 for CH<sub>4</sub> and NO<sub>2</sub>. The Permittee shall ensure that GHG emissions from the Combustion Turbine Generator (CTG3) and heat recovery steam generator (HRSG3) into the atmosphere in excess of 0.460 tons CO<sub>2</sub>/MWh (net), not including duct firing, during the test. To determine this BACT emission limit, Permittee shall calculate the limit based on the measured net hourly energy output (MWh (net)), the CTG is operating above 90% of its design capacity without duct burning firing and the results shall be corrected to ISO conditions (59°F, 14.7 psia, and 67% humidity). If the CTG does not meet the design emissions limit, then the Permittee shall remedy the CTG's failure to meet the design emissions limit, and shall not combust any fuel in the CTG until the Permittee has shown compliance with that limit during a subsequent emission test.
- b. Upon demonstration that the FD2-series combustion turbine generator is in compliance with the design emissions limit via an emission test, the Permittee shall not discharge or cause the discharge of emissions from the Combustion Turbine Generator (CTG3) and heat recovery steam generator (HRSG3) into the atmosphere in excess of 0.460 ton CO<sub>2</sub>/MWh (net) on a 30-day rolling average and shall not discharge or cause the discharge of emissions into the atmosphere in excess 985,340 tons of CO<sub>2</sub>e on a 365-day rolling average. To determine this BACT emission limits, the Permittee shall calculate the limit based on the measured net hourly energy output (MWh (net)) and the tons of CO<sub>2</sub> calculated from the equations provided in 40 CFR 75, Appendix D and F or the CO<sub>2</sub> emissions CEMS data. The calculated hourly rate is averaged daily.
- c. Within 180 days of the date of initial startup of the FD3-series combustion turbine generator, the Permittee shall perform an initial emission test for CO<sub>2</sub> and use emission factors from 40 CFR Part 98 for CH<sub>4</sub> and NO<sub>2</sub>. The Permittee shall ensure that GHG emissions from the Combustion Turbine Generator (CTG3) and heat recovery steam generator (HRSG3) into the atmosphere in excess of 0.460 tons CO<sub>2</sub>/MWh (net), not including duct burner firing, during the test. To determine this BACT emission limit, Permittee shall calculate the limit based on the measured net hourly energy output (MWh (net)), the CTG is operating above 90% of its design capacity without duct burning and the results shall be corrected to ISO conditions (59°F, 14.7 psia, and 67% humidity). If the CTG does not meet the design emissions limit, then the Permittee shall remedy the CTG's failure to meet the



design emissions limit, and shall not combust any fuel in the CTG until the Permittee has shown compliance with that limit during a subsequent emission test.

- d. Upon demonstration that the FD3-series combustion turbine generator is in compliance with the design emissions limit via an emission test, the Permittee shall not discharge or cause the discharge of emissions from the Combustion Turbine Generator (CTG3) and heat recovery steam generator (HRSG3) into the atmosphere in excess of 0.460 ton CO<sub>2</sub>/MWh (net) on a 30-day rolling average, and shall not discharge or cause the discharge of emissions into the atmosphere in excess 1,003,355 tons of CO<sub>2</sub>e on a 365-day rolling average. To determine this BACT emission limits, the Permittee shall calculate the limit based on the measured net hourly energy output (MWh (net)) and the tons of CO<sub>2</sub> calculated from the equations provided in 40 CFR 75, Appendix D and F or the CO<sub>2</sub> emissions CEMS data. The calculated hourly rate is averaged daily.
- e. Modification of the proposed FD2-series combustion turbine generator, identified as CTG3, to the FD3-series combustion turbine generator shall commence within eighteen (18) months of commencement of commercial operation of the initial project, or no later than eighteen (18) months after initial testing is completed. Completion of the initial project will occur the date of the commercial operation of the FD2-series combustion turbine.
- f. Within 180 days of the date of initial startup of for both the FD2 and FD3-series combustion turbine generator, the Permittee shall not exceed a Combustion Turbine Generator average net heat rate of 7,730 Btu/kWh (HHV), not including duct burner firing, during the test for combustion turbine unit. To determine this BACT emission limit, Permittee shall calculate the average net heat rate on a hourly basis consistent with equation F-20 and procedures provided in 40 CFR Part 75, Appendix F, § 5.5.2, the measured net hourly heat rate (kWh), that the CTG is operating above 90% of its design capacity without duct burning and the results shall be corrected to ISO conditions (59°F, 14.7 psia, and 67% humidity). If the CTG does not meet the emissions limit, then the Permittee shall remedy the CTG's failure to meet the emissions limit, and shall not combust any fuel in the CTG until the Permittee has shown compliance with that heat rate limit during a subsequent emission test.
- g. Upon initial demonstration that the FD2-series and FD3-series combustion turbine generator complies with the emissions limit via an emission test, the Permittee shall not exceed a Combustion Turbine Generator net heat rate of 7,730 Btu/kWh (HHV) on a 30-day rolling average, for both the FD2- or FD3-series combustion turbine unit. To determine this limit, Permittee shall calculate the average net heat rate on a

hourly basis consistent with equation F-20 and procedure provided in 40 CFR Part 75, Appendix F, § 5.5.2 and the measured net hourly energy output (kWh). The calculated hourly heat rate is averaged daily.

- h. Permittee shall determine the hourly CO<sub>2</sub> emission rate from 40 CFR Part 75, Appendix G, using F<sub>c</sub> factors updated monthly from fuel analysis or, as an alternative, Permittee may install and operate a volumetric stack gas flow monitor and associated data acquisition and handling system in accordance with the CO<sub>2</sub> CEMS system provided in 40 CFR § 75.10(a)(3) and (a)(5).

## **2. Monitoring of CO<sub>2</sub> Emissions for CTG3/HRSG3**

- a. Permittee shall calculate the amount of CO<sub>2</sub> emitted from combustion in tons per hour (tons/hr), averaged daily, and converted to tons per year (tpy) based on equation G-4 of 40 CFR Part 75 and the average net heat rate on an hourly basis based on the heat input calculation procedures contained in 40 CFR Part 75, Appendix F, equation F-20.
- b. Permittee shall install, calibrate, and operate a fuel flow meter and perform periodic scheduled GCV fuel sampling for the combustion turbine generator and heat recovery steam generator, identified as CTG3/HRSG3, and shall meet the applicable requirements, including certification testing, of 40 CFR Part 75, Appendix D and 40 CFR Part 60.
- c. In accordance with 40 CFR Part 75, Appendix D and 40 CFR Part 60, the Permittee shall ensure that all required fuel flow meter is installed, a periodic schedule for GCV fuel sampling is initiated and all certification tests are completed on or before the earlier of 90 unit operating days or 180 calendar days after the date the unit commences commercial operation (as defined in 40 CFR Part 75, Appendix D and G).
- d. Permittee shall ensure compliance with the specifications and test procedures for fuel flow meter and/or CO<sub>2</sub> emission monitoring system at stationary sources, 40 CFR Part 75 and 40 CFR Part 60.
- e. Permittee shall meet the appropriate quality assurance requirements specified in 40 CFR Part 75, Appendix D and F and 40 CFR Part 60 for the fuel flow meter and/or CO<sub>2</sub> emission monitoring system.
- f. As an alternative to Special Condition II.B.2.b and II.B.2.h, the Permittee may



determine the CO<sub>2</sub> hourly emission rate and CO<sub>2</sub> mass emissions for the combustion turbine generator and heat recovery steam generator, identified as CTG3/HRSG3, using an O<sub>2</sub> monitor according to Appendix F to 40 CFR Subpart 75. In accordance to 40 CFR Subpart 75.13(c), the Permittee shall determine hourly CO<sub>2</sub> concentration and mass emissions with a flow monitoring system; a continuous O<sub>2</sub> concentration monitor; fuel F and Fc factors; and, where O<sub>2</sub> concentration is measured on a dry basis (or where Equation F-14b in Appendix F to 40 CFR Subpart 75 is used to determine CO<sub>2</sub> concentration), either, a continuous moisture monitoring system, as specified in §75.11(b)(2), or a fuel-specific default moisture percentage (if applicable), as defined in §75.11(b)(1); and by using the methods and procedures specified in Appendix F to 40 CFR Subpart 75.

- g. If Special Condition II.B.2.f is utilized for compliance, then the oxygen analyzers shall be quality-assured at least quarterly using cylinder gas audits (CGAs) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, § 5.1.2, with the following exception: a relative accuracy test audit is not required once every four quarters (i.e., two successive semiannual CGAs may be conducted). The Permittee may comply with the quality assurance provisions of 40 CFR Part 75, Appendix B, in lieu of complying with the provisions of 40 CFR Part 60, Appendix F.
- h. As an alternative to Special Condition II.B.2.b, the Permittee may install a CO<sub>2</sub> CEMS and volumetric stack gas flow monitoring system with an automated data acquisition and handling system for measuring and recording CO<sub>2</sub> emissions discharged to the atmosphere.

### **3. CTG3/HRSG3 FD2/FD3 Combustion Turbine Work Practice and Operational Requirements**

- a. Permittee shall calculate the amount of CO<sub>2</sub> emitted for both the FD2- and FD3-series CTG from combustion in tons per hour (tons/hr) on a 365-day rolling average, and converted to tons per year (tpy) based on equation G-4 of 40 CFR Part 75 and the average net heat rate on an hourly basis based on the heat input calculation procedures contained in 40 CFR Part 75, Appendix F, equation F-20.
- b. Permittee shall calculate the CH<sub>4</sub> and N<sub>2</sub>O emissions on a 365-day rolling average. Permittee shall determine compliance with the CH<sub>4</sub> and N<sub>2</sub>O emissions limits contained in this section using the default CH<sub>4</sub> and N<sub>2</sub>O emission factors contained in Table C-2 of 40 CFR Part 98 and the measured actual hourly heat input (HHV).
- c. Permittee shall calculate the CO<sub>2</sub>e emissions on a 365-day rolling average, based on

the procedures and Global Warming Potentials (GWP) contained in Greenhouse Gas Regulations, 40 CFR Part 98, Subpart A, Table A-1.

- d. Fuel for the FD2 or FD3 Combustion Turbines shall be limited to natural gas with a fuel sulfur content of up to 5 grains of sulfur per 100 dry standard cubic feet (gr S/100 dscf). The gross calorific value of the fuel shall be determined monthly by the procedures contained in 40 CFR Part 75, Appendix F, §5.5.2 and records shall be maintained of the monthly fuel gross calorific value for a period of five years. Upon request, Permittee shall provide a sample and/or analysis of the fuel-fired in the Combustion Turbines or shall allow a sample to be taken by EPA for analysis.
- e. Fuel for the heat recovery steam generator identified as HRSG3 shall be limited to pipeline quality natural gas, "off" gas from a nearby refining facility, or a combination of the two. The natural gas shall meet the same requirements as in Special Condition II.B.3.e.
- f. The flow rate of the fuel combusted in combustion turbine emission unit, identified as CTG3, shall be measured and recorded using an operational non-resettable elapsed flow meter.
- g. Permittee shall measure and record the new energy output (MWh (net)) on an hourly basis.
- h. On or before the date of initial performance test required by 40 CFR 60.8, and thereafter, Permittee shall install, and continuously operate, and maintain the HRSG3 equipped with a SCR so emissions are at or below the emissions limits specified in this permit and TCEQ permit No. 42179/PSD-TX-955M1/N-021M1.
- i. On or after initial performance testing, Permittee shall use the combustion turbine, Heat Recovery Steam Generator, Steam Turbine and Plant-wide energy efficiency processes, work practices and designs as represented in the permit application.

#### **4. Requirements during FD2/FD3 Combustion Turbine (CTG3) Startup and Shutdown**

- a. Permittee shall minimize emissions during start-up and shutdown activities by operating and maintaining the facility and associated air pollution control equipment in accordance with good air pollution control practices, safe operating practices, and protection of the facility.
- b. Emissions during startup and shutdown activities shall be minimized by limiting the

duration of operation in startup and shutdown mode as follows:

- i. A startup of CTG3 is defined as the period that begins when there is measureable fuel flow to the CTG3 and ends when the CTG3 load reaches 60 percent. A startup for each CTG3 is limited to 480 minutes.
- ii. A shutdown of each CTG3 is defined as the period that begins when CTG3 load falls below 60 percent and ends when there is no longer measureable fuel flow to CTG3. A shutdown for CTG3 is limited to 180 minutes.
- c. Permittee must record the time, date, fuel heat input (HHV) in mmBtu/hr and duration of each startup and shutdown event in order to calculate total CO<sub>2</sub>e emissions. The records must include hourly CO<sub>2</sub> emission levels as measured by the fuel flow meter and/or O<sub>2</sub> emission monitor (or CO<sub>2</sub> CEMS with volumetric stack gas flowrate) and the calculations based on the actual heat input for the CO<sub>2</sub>, CO<sub>2</sub>e, O<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub> emissions during each startup and shutdown event based on the equations represented in the permit application and Special Conditions II.B.4. These records must be kept for five (5) years following the date of such event.
- d. During startup and shutdown, CTG3 and HRSG3 emissions shall comply with all provisions of BACT emission limitations in Special Condition II.B.1.

## C. Fugitive Emission Sources

### 1. Fugitive Emission Sources Emission Limits

At all times, including equipment startup and shutdown, Permittee shall not discharge, or cause the discharge of emissions from each unit into the atmosphere, in excess of the following:

Table 3. Fugitive Emission Sources Emission Limits

ID No.	Description	GHG Pollutants			Fugitive Sources Emissions Limit	
		Pollutant	Mass Basis TPY	CO <sub>2</sub> e Basis TPY	CO <sub>2</sub> e TPY	Total CO <sub>2</sub> e TPY
NG-FUG / Fuel Gas Piping	Fugitive Natural Gas emissions from piping components & Fuel Gas Piping	CO <sub>2</sub> <sup>1</sup>	0.29	CO <sub>2</sub>	0.29	157
		CH <sub>4</sub>	7.44	CH <sub>4</sub> <sup>4</sup>	156.23	

SF6-FUG	SF <sub>6</sub> Insulated Electrical Equipment	SF <sub>6</sub>	0.00018	4.30	4.30	4.30
---------	------------------------------------------------	-----------------	---------	------	------	------

1. Because the emissions from this unit are calculated to be 94.44% methane (CH<sub>4</sub>) from natural gas analysis, the remaining pollutant emissions are not presented in the table.

## 2. Fugitive Emission Sources Work Practice and Operational Requirements

- a. For fugitive emissions identified as NG-FUG/Fuel Gas Piping, CH<sub>4</sub> emissions shall be calculated annually (calendar year). Permittee shall not exceed 7.44 tons per year of methane (equivalent to 156.23 tons of CO<sub>2</sub>) from all piping components including valves and flanges and an overall emissions limit of 157 tons per year of CO<sub>2</sub>e. Emissions shall be calculated annually based on the emission factors from Table W-1A of 40 CFR Part 98, Subpart W, Petroleum and Natural Gas Systems using the reduction credit from 28LAER and calculations given in the TCEQ Technical Guidance Document for Equipment Leak Fugitives, dated October 2000.
- b. The Permittee shall implement an as-observed auditory, visual and olfactory (AVO) method for detecting leaking from natural gas piping components
- c. For emission unit SF6-FUG, SF<sub>6</sub> emissions shall be calculated annually (calendar year) in accordance with the mass balance approach provided in equation DD-1 of the Mandatory Greenhouse Gas Reporting rules for Electrical Transmission and Distribution Equipment Use, 40 CFR Part 98, Subpart DD. Permittee shall construct only one (1) 72 lb SF<sub>6</sub> circuit breakers with leak detection.
- d. Permittee shall maintain a file of all records, data measurements, reports and documents related to the fugitive emission sources including, but not limited to, the following: all records or reports pertaining to maintenance performed, all records relating to compliance with the Monitoring and Quality Assurance and Quality Control (QA/QC) procedures outlined in 40 CFR 98.304.

## III. Recordkeeping Requirements

- A. In order to demonstrate compliance with the GHG emission rates for both the FD2- and FD3-series CTG, the Permittee will monitor the following parameters and summarize the data on a calendar month basis.
  - a. Operating hours for all air emission sources;
  - b. The natural gas fuel usage for all combustion sources, using continuous fuel flow monitors (a group of equipment can utilize a common fuel flow meter, as long as actual fuel usage is allocated to the individual equipment based upon actual



- operating hours and maximum firing rate);
  - c. Record the number and duration of start-ups for each engine; and
  - d. Record the number and duration of shutdowns for each engine.
- B. Permittee will maintain site-specific procedures for best/optimum maintenance practices and vendor-recommended operating procedures and O&M manuals. These manuals must be maintained with the permit and located onsite.
- C. Permittee shall maintain records that include the following: the occurrence and duration of any startup, shutdown, or malfunction, performance testing, calibrations, checks, GHG emission units and CO<sub>2</sub> emission CEMS maintenance (if a CO<sub>2</sub> CEMS is present), duration of any periods during which a monitoring device is inoperative, and corresponding emission measurements.
- D. Permittee shall maintain records for five (5) years from the date of any of the following: the duration of startup, shutdown, the initial startup period as defined in Section IV for the emission units, pollution control units and CEMS (if a CO<sub>2</sub> CEMS is present), malfunctions, performance testing, calibrations, checks, maintenance and duration of an inoperative monitoring device and emission units with the required corresponding emission data.
- E. Permittee shall maintain records of all GHG emission units and CO<sub>2</sub> emission CEMS certification tests (if a CO<sub>2</sub> CEMS is present) and monitoring and compliance information required by this permit.
- F. Permittee will implement the AVO program and keep records of the monitoring results, as well as the repair and maintenance records.
- G. At least once per year, the Permittee will obtain an updated analysis of the inlet gas to document the CO<sub>2</sub> and methane content of the gas streams.
- H. Permittee shall maintain records and submit a written report of all excess emissions to EPA semi-annually, except when: more frequent reporting is specifically required by an applicable subpart; or the Administrator or authorized representative, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. The report is due on the thirtieth (30<sup>th</sup>) day following the end of each semi-annual period and shall include the following:
- 1. Time intervals, data and magnitude of the excess emissions, the nature and cause (if known), corrective actions taken and preventive measures adopted;

2. Applicable time and date of each period during which the monitoring equipment was inoperative (monitoring down-time);
  3. A statement in the report of a negative declaration; that is; a statement when no excess emissions occurred or when the monitoring equipment has not been inoperative, repaired or adjusted;
  4. Any failure to conduct any required source testing, monitoring, or other compliance activities; and
  5. Any violation of limitations on operation, including but not limited to restrictions on hours of operation of the emergency generator or fire pump.
- I. Excess emissions shall be defined as any period in which the facility emissions exceed a maximum emission limit set forth in this permit.
- J. Excess emissions indicated by GHG emission source certification testing or compliance monitoring shall be considered violations of the applicable emission limit for the purpose of this permit.
- K. All records required by this PSD Permit shall be retained for not less than 5 years following the date of such measurements, maintenance, and reports.

#### **IV. Shakedown Periods**

The combustion turbine emission limits and requirements in conditions II.A and II.B shall not apply during combustion shakedown periods. Shakedown is defined as the period beginning with initial startup and ending no later than initial performance testing, during which the Permittee conducts operational and contractual testing and tuning to ensure the safe, efficient and reliable operation of the plant. The shakedown period shall not exceed the time period for performance testing as specified in 40 CFR § 60.8. The requirements of special condition I.C of this permit shall apply at all times.

#### **V. Performance Testing Requirements:**

- A. Upon completion of the first phase of construction, the holder of this permit shall perform an initial stack test for the FD2-series combustion turbine to establish the actual quantities of air contaminants being emitted into the atmosphere from emission unit CTG3/HRSG3 and to determine the initial compliance with the CO<sub>2</sub> emission limits established in this permit. Sampling shall be conducted in accordance with 40 CFR § 60.8 and EPA Method 3a or 3b for the concentration of CO<sub>2</sub> for the CTGs.

- B. Upon completion of the second phase of construction, the holder of this permit shall perform an initial stack test for the FD3 series combustion turbine to establish the actual quantities of air contaminants being emitted into the atmosphere from emission unit CTG3/HRSG3 and to determine the initial compliance with the CO<sub>2</sub> emission limits established in this permit. Sampling shall be conducted in accordance with 40 CFR § 60.8 and EPA Method 3a or 3b for the concentration of CO<sub>2</sub> for the CTGs.
- C. Within sixty (60) days after achieving the maximum production rate at which the F2-series CTG will be operated, but not later than one hundred and eighty (180) days after initial startup of the facility, performance tests(s) must be conducted and a written report of the performance testing results furnished to the EPA. Additional sampling may be required by TCEQ or EPA.
- D. Within sixty (60) days after achieving the maximum production rate at which the FD-3 series CTG will be operated, but not later than one hundred and eighty (180) days after initial startup of the facility, performance tests(s) must be conducted and a written report of the performance testing results furnished to the EPA. Additional sampling may be required by TCEQ or EPA.
- E. Permittee shall submit a performance test protocol to EPA no later than thirty (30) days prior to the test to allow review of the test plan and to arrange for an observer to be present at the test for both the FD2- and FD3-series combustion turbine generator. The performance test shall be conducted in accordance with the submitted protocol, and any changes required by EPA.
- F. The holder of this permit shall perform stack sampling and other testing as required to establish the actual quantities of CO<sub>2</sub> emissions being emitted into the atmosphere from emission unit CTG3/HRSG3 and to determine the initial compliance with all emission limits established in this permit for both the FD2- and FD3-series CTG. Sampling shall be conducted in accordance with EPA Methods 1-4 and 3b for the concentration of CO<sub>2</sub> for the CTGs.
- G. Fuel sampling for emission unit CTG3/HRSG3 shall be conducted in accordance with 40 CFR Part 75 and Part 98.
- H. The turbine shall be tested at or above ninety percent (90%) of maximum load operations for the atmospheric conditions which exist during testing. The duct burners shall be tested at its maximum firing rate while the turbine is operating as close to base load as possible. The tested turbine load shall be identified in the sampling report. The permit holder shall present at the pretest meeting the manner in which stack sampling will be executed in order to

demonstrate compliance with the emissions limits contained in Section II and the emission standards found in NSPS, Subpart KKKK.

- I. Air emissions from each HRSG exhaust stack shall be tested while firing at the minimum load in the normal operating range. The normal operating range consistent with emission limits is to be determined during stack testing. Air emissions will be sampled and analyzed while at a minimum load include (but not limited to) VOC and O<sub>2</sub>.
- J. Performance tests must be conducted under such conditions to ensure representative performance of the affected facility. The owner or operator must make available to the EPA such records as may be necessary to determine the conditions of the performance tests.
- K. The owner or operator must provide the EPA at least thirty (30) days' prior notice of any performance test, except as specified under other subparts, to afford the EPA the opportunity to have an observer present and/or to attend a pre-test meeting. If there is a delay in the original test date, the facility must provide at least seven (7) days prior notice of the rescheduled date of the performance test.
- L. The owner or operator shall provide, or cause to be provided, performance testing facilities as follows:
  - 1. Sampling ports adequate for test methods applicable to this facility,
  - 2. Safe sampling platform(s),
  - 3. Safe access to sampling platform(s), and
  - 4. Utilities for sampling and testing equipment.
- M. Unless otherwise specified, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For purposes of determining compliance with an applicable standard, the arithmetic mean of the results of the three runs shall apply.



## **VI. Agency Notifications**

Permittee shall submit GHG permit applications, permit amendments, and other applicable permit information to:

Multi Media Planning and Permitting Division  
EPA Region 6  
1445 Ross Avenue (6 PD-R)  
Dallas, TX 75202  
Email: [Group R6AirPermits@EPA.gov](mailto:Group R6AirPermits@EPA.gov)

Permittee shall submit a copy of all compliance and enforcement correspondence as required by this Approval to Construct to:

Compliance and Enforcement Division  
EPA Region 6  
1445 Ross Avenue (6EN)  
Dallas, TX 75202